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ABSTRACT

This research report ordered by the California Senate analyzes problems and possible solutions to postsecondary education finance in that state. A first section explores the background to the issues and concludes that higher education should be a top priority of the state government now and in the future. A second section examines the problem of how the state can respond to its projected needs in education by looking at: how higher education has been funded in the state in the past; how California compares to other states; the benefits of seeing higher education as an investment; and alternative funding sources. The third section proposes a solution to economic constraints through institutional reform, lessons from other states that have revitalized higher education, and suggestions for what can be done in California. The report recommends recommitment to the state's investment in The Master Plan, reduction in state budget caseload growth in those programs that threaten higher education future funding, cuts in campus costs, a refocusing on regional collaboration, sharpened goals and mission, confrontation of workload and cost concerns through a redesign of faculty reward systems, enhanced student preparation and performance, and linkage of policy goals to funding through monitoring performance outcomes. (Contains 63 references.) (JB)

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How California Can Maintain Its Commitment to Higher Education

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August 23, 1994

Prepared for the Senate
by Gary W. Adams

HE027 989

FORWARD

This report was prepared at the request of the Rules Committee on behalf of the Senate.

It is intended as a reference and planning document on California higher education funding for use by legislators, legislative staff, the higher education community and the general public.

The purpose of the report is to outline perceived problems and possible solutions to postsecondary education finance in this state.

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Executive Summary

How California Can Maintain Its Commitment to Higher Education

The Role of Higher Education in An Information Age

With the coming dawn of an information-based economy, California's unparalleled systems of higher education will play a central role in the state's overall quality of life by fostering increased worker productivity.

This is because the computer will be to the late 20th and early 21st centuries what the steam engine was to the late 18th and early 19th centuries; it will change the face of society, its economy and its governance.

Thus far, U.S. productivity is stagnant amid this quickening transition from an age of manufacturing to an age of information. Although the United States remains the most productive country in the world, productivity growth declined sharply beginning about 1973. By the late 1980s, it had stopped dead in the water.

Rising productivity is the basis for an improved standard of living and a high quality of life. Historically, a worker, by increasing the goods or services produced per hour without an accompanying decline in quality, increased real wealth, from which he or she might have received greater pay and a better life.

The Importance of "Knowledge Workers"

But, in the coming information age, increasing the output of physical laborers will no longer create sufficient economic wealth by itself. What will matter even more will be the productivity of what some call the "knowledge workers."

The knowledge worker will be one who knows how to allocate information to productive use, just as the capitalist knew how to allocate capital to productive use. Because information will be the new means to produce wealth-making capital, lifelong education will become a necessity, placing even greater challenges on public education systems.

It is important that higher education be recognized as a top state government budget priority because of this emerging, crucial need.

Meeting Social, Cultural and Economic Goals

Traditionally, higher education has played a leading role in the public's social, cultural and economic goals. Public education systems are equipped to achieve these common goals, some of them formally outlined in California's Master Plan for Higher Education.

Public higher education in California for many decades has sought to promote a better-educated, more skilled work force and to prevent the fragmentation of society along class or racial lines. In so doing, it has:

- Permitted personal growth and improvement,
- Educated individuals to participate in social institutions,
- Permitted the achievement of social mobility,
- Given workers the means to pursue higher wages and greater control over their financial futures, providing economic security.

By and large, this Master Plan has served well and achieved its goals.

Key Assumptions in the Master Plan

The 1960 blueprint evolved over time to rest on three key assumptions in pursuit of these goals:

- Every eligible Californian is entitled on an equitable basis to a state-funded higher education [open and equitable access];
- The system should seek to attain and retain an outstanding academic reputation [quality];
- Student contributions to the cost of such education through fees should be low and restricted to non-instructional costs [affordability].

These traditional Master Plan roles continue into the information age and in some respects become even more important for several reasons:

- California's rapid population growth will continue. It is expected to increase by 6.3 million to a total of 36.3 million in 2000.
- California is the most racially and ethnically diverse state. Nearly 22 percent of its residents are foreign-born and 31.5 percent speak a language other than English. By 2004, it will become the first state populated by a plurality of minorities. At least four of every five new Californians in the 1990s will be Asian or Hispanic.
- California has some of the greatest economic disparities between high- and low-income family earnings in the West: high-income families earn nearly 10 times what low-income families make. Median household income is one of the highest in the nation and, yet, California also has the second-highest rate of citizens on public assistance of any state.

The Increasing Importance of Higher Education

Although entrants into the work force over the next decade will face a scarcity of available jobs and wage deflation, 18 of 20 professions projected to be the most in demand in the early information age will require college degrees. The evolution of this phenomenon already is manifested in the rising education of the nation's work force. In 1960, only 41.1 percent of the population had completed four or more years of high school and only 7.7 percent had a similar amount of college. In 1992, those rates had increased to 79.4 percent and 21.4 percent, respectively.

Job creation occurs in environments with good universities, strong infrastructure and a pleasing quality of life. In a study of companies undergoing expansion around Seattle, it was determined over 70 percent of the firms had a direct, active role in the University of Washington, which is noted for the number of Nobel Prize research faculty on staff.

In another example, an industrial complex adjacent to the Massachusetts Institute of Technology at one point was creating more jobs than 13 states combined. It still is creating more jobs than six to eight states.

By providing a vehicle for personal growth, social mobility and economic security, higher education has performed a crucial social function in addressing California's population growth and diversity, as well as its income disparity.

Threats To Meeting Future Economic Challenges

But California's higher education will not be able to live up to the economic challenges of the future or the social promises of the Master Plan, based on projected resources and enrollments in the next decade.

When the Master Plan was developed, higher education in California was a high state budget priority. Yet, despite California's compelling social and economic needs, a gradual but pronounced disinvestment of state funding for higher education has occurred.

A Declining Share of the State Budget

In 1967-68, higher education comprised nearly 17 percent of state General Fund spending. By 1993-94, that share had declined to 12.1 percent. Had spending remained at the former level, California would be spending about $2 billion more on higher education than it currently does-- or about $1,600 more in state funding for each of the 1,267,171 full-time equivalent students (FTES) enrolled in the three public higher education segments in 1993-94.

Translated into the impact on the individual systems of higher education, state General Fund support for the University of California was nearly cut in half: from 32 percent of its budget in 1969-70 to 18.1 percent in 1993-94.

For the California State University system, state General Fund support dropped from 69.2 percent in 1969-70 to 53.7 percent of its 1993-94 spending plan.

Disinvestment of community colleges took a different turn. Prior to Proposition 13 in 1978 (which reduced by about 54 percent the property tax funds available to local governments to finance services), two-thirds of community college funding came from property tax revenue and the remaining third from state funds. This initiative immediately reversed that relationship.

In 1977-78, community colleges received 39.6 percent of their funding from the state and 60.3 percent from local revenue; in 1978-79, the funding mix was 69.2 percent from the state and 28.9 percent from local sources.

With the single-year aberration of 1979-80, when state support increased to 80.6 percent, community colleges have experienced the same steady drop as UC and CSU in state funding as a percentage of their overall budgets, from a high of 80.6 percent to 34.5 percent in 1993-94.

Reasons for Decline in State Support

All three systems, then, have seen a pronounced decline. Primary reasons for state government's declining fiscal support are:

- Budgetary aftershocks caused by Proposition 13;
- The 1990-94 California recession; and,
- The phenomenal caseload growth of other state-funded programs.

Money that might previously have gone into higher education has been increasingly used instead as a California "budget balancer."

Not Likely to Regain Ground

There are two reasons why higher education will not likely regain ground after the current recession and under current budgetary circumstances.

First, the growth in the state prison system -- as well as caseload increases in health and welfare -- is likely to continue out-pacing enrollment growth for higher education. In other words, despite the fact postsecondary education will see at least a 40 percent increase in its enrollments over the next decade or so, other programs will continue to grow at an even greater rate.

Second, even if California's state revenues return to pre-recessionary levels of growth, an on-going structural imbalance between revenues and expenditures will continue the multibillion-dollar shortfalls of the last several years.

Comparisons with Other States

When compared with other states, California exhibits the following characteristics:

- California's system of higher education has one of the largest enrollments of any state and is among those with the highest rates of participation by eligible students.
- California state government, in the wake of Proposition 13, has average tax wealth and revenue-generating capacity, relative to other states.
- Californians make a low-to-medium student/family contribution to the individual costs of obtaining a higher education, relative to other states. This continues a long-standing tradition of no tuition and low fees, despite recent tremendous year-to-year fee increases.
- California's state budget appropriations for higher education are low relative to its capacity to fund programs.

A comparison with other states also shows that California's use of higher education money as a budget balancer reflects a national phenomenon in this recession. However, in other states, decreased funding did not take place because states had fewer overall resources, as it did in California. Rather, higher education lost ground in state funding priority, usually because of hefty increases in Medicaid caseloads.

Projections in Higher Education Enrollments

Arizona, California, Colorado, Kansas, New Mexico and Alabama are the most successful among the states in attracting students to their public colleges and universities, having a total public enrollment more than four times each state's yearly number of high school graduates.

California was second nationally in its 1992-93 college participation ratio, measured by public higher education FTES per high school graduates. It had a 57.9 percent rate of college attendance among recent graduates who were California residents.

On top of this already high rate of utilization, the workload for California higher education is projected to dramatically increase in the coming decade.

Called Tidal Wave II -- in the aftermath of the first large wave of students in the 1950s and 1960s who triggered the Master Plan -- the exact size of the increase is open to debate. But without doubt it will be one of the largest postsecondary-education influxes in U.S. history. Projections range from 460,000 new students (above the 1.3 million already enrolled) to 700,000 or 800,000.

Rising Student Fees

Student fees have been a much-discussed revenue source for all three segments during the current recession. However, fees are not as significant a share of the segments' budgets as the discussion might indicate. For UC, system-wide fee revenue as a budget share has grown from 2.3 percent in 1969-70 to 5.4 percent in 1993-94. For CSU, student fee revenue has escalated from 8.5 percent of its overall system budget in 1969-70 to 19.2 percent in 1993-94.

California's community colleges had no fees until 1984, but fee increases since then have propelled fee revenue to a 6.7 percent share of the overall statewide CCC budget.

Fees charged resident undergraduates at UC and CSU are at or slightly above the average for comparable public university systems, but fees charged at the California community colleges are the lowest of any state in the nation.

These relative share increases belie the tremendous year-to-year fee increases that have taken place in California, which at one time had the lowest resident fees in the country for all three segments.

If fees for UC and CSU in 1994-95 rise by 10 percent and community college fees remain at $13 per unit, as anticipated, annual fees at UC will have risen 134 percent since 1990-91 (from $1,624 to $3,799), annual fees at CSU will have increased 103 percent (from $780 to $1,584) and the fee hikes at the community colleges will total 290 percent (from $100 to $390). These hikes occurred because of extraordinary budget pressures and were in violation of a 1985 state law that required increases to be "gradual, moderate, equitable and predictable."

Expanding Revenue Bases

As declining state support has forced the institutions to look elsewhere for support, however, student fee revenue is not the only source used to back fill state cuts. UC, because of its broad range as the state's doctoral granting institution, has a much more complex budget than either CSU or the community colleges. UC has expanded its revenue base through increased efforts at fund raising, overhead from research, and revenue from technology developments. CSU has had great success in

increased fund-raising efforts. But, because its primary mission is teaching, income from research does not figure significantly in CSU's budget.

Through private fund raising, UC has increased its support from gifts by nearly 300 percent over the last decade: from $123.1 million in 1982-83 to $472.4 million in 1992-93. For CSU, support from private gifts increased by over 400 percent: from $21.8 million in 1982-83 to $109.4 million in 1992-93.

At about $9 billion annually, federal research funding is UC's largest single source of research money. This source also has grown significantly: from $180 million in 1988-89 to $233 million in 1992-93, or 29.4 percent over the last five years.

Funding Not Sufficient for Projected Growth

While these efforts have yielded results, none of these enterprises will provide the future funding necessary to finance projected enrollment growth.

California's pursuit of economic and social goals through its system of higher education is threatened if state funding continues to decline. The system's flagship institution -- UC -- received only 18.1 percent of its budget from state funds in 1993-94. That level of support, and the previous two-decade trend of disinvestment, threaten to essentially "privatize" the university or place it in the category of quasi-public colleges and universities, such as those found in Pennsylvania.

Money invested in higher education enhances society as a whole.

But critics of reinvesting in higher education argue government is incapable of efficiently allocating resources. According to this approach, if private consumers are permitted to retain more of their incomes, the marketplace will allocate those resources far more efficiently. For every $100 million in tax increases, they believe, the economic consequences cost California about 2,500 jobs.

An onerous tax burden will indeed impede growth, but economic growth cannot be sustained without a strong infrastructure, which includes public higher education. Further, not all government expenditures are the same in their income or job impact.

A modest tax increase, such as a 2 percent rise in a state's overall tax burden, for example, has no adverse effect on personal income growth if the revenue goes to educational programs that improve work force quality. But that 2 percent increase cuts income growth if the revenue is channeled to a program which does not positively affect worker productivity, such as prison spending.

Fees, fund raisers and grants cannot replace state funds as the backbone of the Master Plan.

How California Can Maintain Its Commitment to Higher Education

California, because of its compelling interest in economic and social concerns at the onset of the information economy, could maintain its historic commitment to the Master Plan for Higher Education. But funding at that level requires a program of shared sacrifice or contribution from all parties involved in the financing equation -- state government, higher education, students and their parents.

To accomplish this goal, the following six-part strategy is recommended:

STRATEGY #1: Reinvest in the Master Plan for Higher Education.

As documented in this report, California has backed away from its commitment to offer every Californian an opportunity to enroll in a public college or university. With a huge influx of students projected over the next decade and a half, the promise becomes ever more dim.

The California Constitution Revision Commission is working on a plan to address the structural state budget problems outlined in Part II of this report. Following sound budgetary policy, the commission has proposals under consideration which would revise the property tax constraints of Proposition 13, revise or eliminate the constitutional spending ceiling of Proposition 4, eliminate the school-spending guarantees of Proposition 98 and revise the sales tax to expand the base toward services.

These constraints in a theoretical sense hamper use of general tax funds for state spending priorities. The commission's projections show that state spending will require $5-7 billion in new revenue over the next decade.

Although voter endorsement is required to amend Proposition 13 and make other changes in the state Constitution, such a sweeping change may be difficult to accomplish. However, good fiscal policy would recommend this approach as the first course of action to permit a recommitment to the Master Plan.

Should this effort fail, the Governor and Legislature would need to develop a mechanism to protect higher education's funding base over the long-term. The effort should permit enrollment growth and allow some use of performance-based budgeting.

One such remedy would be to place on the June 1996 ballot a proposed state constitutional amendment that would earmark revenues from the top two personal income-tax brackets, as well as revenues produced from permanent suspension of the renters' tax credit, in a special fund for educational excellence.

There are sound arguments for and against earmarking of state funds. The major advantage to earmarking is that the recipient or beneficiary has some level of guaranteed funding, permitting a greater degree of long-term planning. The chief disadvantage is that, as alluded to above, good budgeting dictates that state government needs maximum flexibility to respond quickly to shifting priorities or sudden revenue changes.

Earmarking top income tax brackets would produce a revenue source that grows as the economy grows. The renters' tax credit revenue would be more difficult to earmark, as it is a tax expenditure, but funds equal to the projections for growth in this program could be diverted from the General Fund to the new special fund. Revenue from the renters' tax credit would not be available until the 1997-98 fiscal year, since it is being used until then to help offset a state budget shortfall. But the income-tax revenue could become available in 1996-97.

It would be important that the resulting revenue, about $800 million in 1995-96, be split equally between elementary and secondary schools (K-12), and higher education. Higher education's base budget would need to be protected and K-12 would need assurances its Proposition 98 funding guarantees would not be reduced.

Of the $600-700 million in new higher education funds this would generate in 1997-98, $150 million should go to the CAL Grant program to assure that all needy and eligible student applicants receive financial aid. The remaining monies would go to the special fund, to be allocated based on

performance outcome evaluations. This approach will be discussed below. This special fund, together with the protection of base funding and other strategies, would accommodate the projected enrollment of Tidal Wave II.

After the public has had an opportunity to address the above proposals, the Governor and Legislature should call a Summit on Higher Education Funding in June 1996. This effort would focus on the effects of any constitutional changes, including their impacts on student fees and financial aid.

In terms of capital expenses, UC and CSU facilities should be adequate to address enrollment expansion until the year 2000, based on calculation by the California Postsecondary Education Commission (CPEC) and the Legislative Analyst's Office (LAO).

Community college facilities -- and the deferred maintenance, seismic safety and technology needs of all campuses -- should be reviewed on a yearly basis.

STRATEGY #2: <u>Reduce state budget caseload growth in those programs that threaten higher education's future funding.</u>

Prison caseload growth over the last decade has exploded, garnering an ever-expanding share of the state budget. This increase has occurred in part due to mandatory and longer sentences, despite the fact violent crime in California peaked in 1980 and has been in general decline since.

Yet the public perceives crime as pervasive and on the rise. This perception is driving policy decisions that will have staggering long-term fiscal consequences that California's budget structure cannot support.

California will have to finance a $1.6 billion increase in prison operating costs and $6.6 billion in new construction costs required by the new "three-strikes" law [AB 971 of (1994)], partly by restricting access to higher education.

Growth in prison inmates, Aid to Families with Dependent Children and Medi-Cal caseload were edging out other programs under the current revenue/spending structure even prior to AB 971. Given research on the costs of infrastructure expenditures, referenced in Part II of this report, policy-makers will have to prioritize what functions state government under the current financing structure can and wants to fund.

STRATEGY #3: <u>Cut campus costs and refocus on regional collaboration, efficiency, and sharpened goals and missions</u>.

Future funding for public higher education is going to require the maximum use from state funds invested. An adage that higher education has a static level of productivity is not acceptable in an era of limits and shared sacrifice. It is appropriate to ask any public organization to modernize its operations and improve efficiency.

Indeed, the three segments of higher education are beginning to reshape their institutions in significant ways. Regional collaboration and sharing resources--among the public segments, with independent colleges and universities and with the K-12 system--should become a top priority.

College planning has long had a formal course utility review process--called program review. This process analyzes programs and coursework, adding those needed by changing social or economic circumstances, and eliminating those not needed. However, students of organizational behavior know that programs tended to be layered on, not purged. Regional collaboration, where colleges, universities and K-12 schools share resources and eliminate overlapping programs, could change this

situation, if the collaboration is rewarded (or the lack of collaboration becomes a disincentive) through a performance budgeting approach as outlined in Strategy #6.

A large part of the answer to increasing productivity will lie in better utilization of technology.

CPEC should take the lead in working with campuses in this effort through its responsibilities for performance budgeting.

STRATEGY #4: To address some of the workload and cost concerns raised in this report, campuses should engage their faculty in a redesign of the faculty reward system, as has been done in Ohio.

Faculty in California higher education are under great demands and, in the face of declining resources, have by and large undertaken greater teaching loads. However, the current reward system in higher education holds disincentives for teaching and ultimately results in a drift in faculty time away from teaching. This increases costs while diverting faculty focus from the institutional mission of the home campus to the larger concerns of the profession. Research is an important part of academe's contribution and will continue to be so. But rewards are needed for faculty activities in addition to or in lieu of research.

The reward structure needs to move from the individual to the department, where it can operate on a "team" model. Without tampering with the merit step system, CPEC, in consultation with the segments, should develop a plan to earmark some of the new performance funding, proposed above, to departments to provide faculty rewards for teaching, mentoring and professional development.

The department -- or team -- should strive to focus on critical thinking, problem-solving and communication skills. The team should be interdisciplinary to take advantage of the cross-pollination of methodologies, approaches and ideas.

Many believe the coming technology of distance or collaborative learning will provide teachers the opportunity to be accorded recognition for excellence by their peers, as is currently the case when faculty members publish research.

STRATEGY #5: Students must better prepare for college work and better use their time while in college.

Amid proposals for three-years degrees and other accelerated learning methods, high school students must make better use of their senior year by taking college-prep courses or course work at local community colleges. UC has explored the idea of entry with sophomore standing for students who prepare in this way. Better use of summer sessions, extension courses and "telecourses" would also shorten students' time to earn degrees.

K-12 performance in educating students will have an increasingly important impact on higher education's ability to perform its Master Plan roles. In an era of limits, public education and its ability to deliver quality must be viewed in the information age as a continuous system--kindergarten to college.

STRATEGY #6: Link policy goals to funding through monitoring performance outcomes.

The nexus between policy and budgeting should be strengthened through greater use of performance measures, with funding incentives to encourage certain institutional behaviors that have been outlined in policies.

Of course, performance funding, to be successful, should have incentives as well as disincentives. In consultation with the segments, CPEC should investigate whether or not this linking could occur through its statutory accountability assessment requirements and then be used to allocate funding. AB 1808 (1991) set up an annual CPEC report to the Legislature which would eliminate redundant reporting demands by state government on the higher education systems, and assess the accountability of higher education programs.

CPEC should report to the Legislature its recommendations on this subject no later than January 1, 1996. For any role in monitoring performance and allocating funding, CPEC should receive the budget support necessary to act appropriately.

The CPEC report, in addition to looking at incentives, could take into account the following suggestions for disincentives:

- Impose penalties in a department's level of performance funding for a lack of compliance in the process;
- Reduce or remove administrative flexibility on General Fund expenditures at the institutional level for failure to comply with performance monitoring;
- Require institutional oversight by a technical assistance team, or conservator, until institutional or segmental performance is consistent with clearly stated public policy goals;
- Hold public hearings regarding a particular institution or segment to discuss unacceptable performance indicators and potential solutions to obtain different outcomes; and/or,
- Withhold some fraction of the base budget at the beginning of the fiscal year with release contingent on demonstrated progress toward a given goal.

Part I

BACKGROUND: What Does California Need from Higher Education?

Traditionally higher education has played a leading role in helping to produce an informed citizenry committed to the intellectual, scientific, moral, and agricultural improvement of society. It was firmly believed that a widespread diffusion of knowledge would enhance the state as a whole. This notion formed the basis for the 1960 Master Plan for Higher Education, which established that every citizen have access to an affordable, quality postsecondary education. For nearly 35 years the Master Plan has served California well. However, California's economy is now undergoing a fundamental restructuring that will have far-reaching effects on the education and training needs of citizens. Higher education will be called upon to fill a greater social and economic role. Specifically, this section identifies three vital needs for the future. These are:

- To promote a more skilled workforce, in order for the state to compete in a technologically advanced "information" economy;
- To prevent the fragmentation of society along class or racial lines; and
- To provide leadership in the effort to raise economic productivity, which has declined, yet is critical to a rising standard of living.

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The Current California: Population

What does California look like today, what will it look like tomorrow and how will its needs change?

California is the most populous state in the union. Its 30.9 million residents comprise 12.1 percent of the 255.1 million Americans nationwide.[1] Over the last several decades, this population base has grown at a rate twice as fast as the nation's.[2] In fact, on average for each year over the last 15 years, California has absorbed the equivalent of the current population of the entire state of Alaska each and every year.[3] This explosive growth is not unique to recent history, either. California has long been a magnet. "During the century following 1860, California's population approximately doubled five times or once each 20 years."[4]

This occurrence has offered both opportunity and peril. Opportunity because without population growth an economy stagnates.

> The growth and structure of the population affect the economy through both the supply and demand channels. On the supply side, the size of the working-age population is a key determinant of the number of people who take part in the production of goods and services. In addition, changes in the composition of the population may affect productivity growth, labor force participation rates, and the length of the workweek. These are important determinants of the supply of labor services and thus critical elements of the productive potential of the economy.
>
> On the demand side, population growth directly influences consumer expenditures (which accounts for two-thirds of the gross domestic product)--not only their total amount but also their composition. The demand for housing and related goods and services is especially sensitive to demographic changes, but consumption as well as saving behavior also are influenced.[5]

On the other hand, population growth poses peril because, depending on the demographics of the surge, demands can be placed upon government that the tax base cannot or will not support.[6]

Besides being the most populated state, California boasts the most racial and ethnic diversity. According to the 1990 census, 21.7 percent of its residents were foreign-born and 31.5 percent speak a language other than English.[7] This diversity reflects the change in the contour of the population surge. Decades earlier the surge was largely Caucasian emigrants from other states. Now, however, immigration from foreign countries accounts for more than half of the population's net growth.

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[1] Statistical Abstract of the United States 1993 (Washington, D.C.: United States Department of Commerce, 113th edition), p. xii.

[2] CAL Facts (Sacramento: Legislative Analyst's Office, April 1994), p. 7.

[3] California Statistical Abstract 1993 (Sacramento: California Department of Finance, November 1993), p. 10.

[4] Ibid., p. vii.

[5] Wascher, William; Burch, Susan and Goodman, John, Jr., "Economic Implications of Changing Population Trends," Federal Reserve Bulletin (Washington, D.C.: Board of Governors of the Federal Reserve System, December 1986), p. 815.

[6] California's Growing Taxpayer Squeeze (Sacramento: California Department of Finance, November 1991), p. 3.

[7] Ibid.

The Current California: Income

High-Earning Occupations Employ a Growing Share of the Workforce		
Distribution of Occupation (Standardized to 1982)	1973	1982
Top Third ($382-773/week)	0.25	0.29
Middle Third ($264-382/week)	0.34	0.33
Bottom Third ($71-264/week)	0.41	0.39

Source Hudson Institute

If "diversity" best describes California's population, perhaps "disparity" best characterizes the relative wealth of citizens. "California has some of the greatest disparities in the region (e.g., the West) between high and low income family earnings, with high income families earning nearly 10 times that of the low income families."[8] Prior to the current recession, California had a median household income level in 1989 of $35,798, which ranked it eighth in the nation.[9] In 1992, California ranked 11th nationally in per capita personal income at an average of $21,472. Only Alaska and Hawaii had higher averages in the Western region.[10] As a whole, California residents in 1992 earned $662 billion in personal income--approximately 13.2 percent of the national income.[11] About 60 percent of this income came from wages and, of those wages, more than 50 percent came from services and manufacturing.[12]

But more workers are earning low wages		
Distribution of Occupation (Standardized to 1982)	1973	1982
Top Third (>$385/week)	33.3%	32.6%
Middle Third ($239-385/week)	34.8%	31.7%
Bottom Third (<$239/week)	31.9%	35.7%

Source Hudson Institute

In stark contrast to this wealth, California also has the second highest rate of citizens on public assistance of any state.[13] California ranks twelfth in the percentage of families with only one parent (one-fourth of all Californian families).[14] Perhaps most revealing, nearly one of every seven California households lived below the poverty line even before the current recession.[15]

This disparity obviously has important social ramifications. But recent research suggests that a large income gap between rich and poor families also has an important impact on economic growth and worker productivity.[16]

Conventional economic belief has held that the overall economy is not affected by the distribution of income or by disparities in wealth. Traditional focus has been on total income rather than on income gap; rising aggregate income meant rising economic growth. Income inequality was thought to result from slow growth, not be the cause. Recent theory, however, contends that income gaps lower

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[8] "Working Paper #1B/ A Region of Contrasts", p. 27.

[9] Statistical Abstract, p. xix.

[10] California Statistical Abstract, p. 201.

[11] Ibid.

[12] Ibid., pp. 51-52.

[13] Statistical Abstract, p. xx.

[14] Ibid., p. xiii.

[15] "Working Paper 1B/ A Region of Contrasts," p. 27.

[16] Aaron Bernstein, "Inequality-How the Gap Between Rich and Poor Hurts the Economy," Business Week, August 15, 1994, pp.78-83.

productivity, cutting job and income growth and adversely affecting the whole economy.[17] This occurs because, in the face of rapidly-emerging new technologies and a need for better-educated, highly-trained employees, lower income families cannot afford a college education. This resulting overall skill level lowers their lifetime wage potential and it cuts their productivity as workers in the information age. Limiting access to a college education in the information age will, thus, have an adverse impact on society and the economy as a whole.

The national economic downturn, which began in 1990 but leveled out in early 1993, has continued to decimate California and the incomes of its residents. While the state's personal income during the 1980s exceeded 6 percent in year-to-year growth and well out-performed the national average, recession income growth slowed to the 2 percent level, far below California's rate of inflation or its rate of population growth.[18] As a result, the state's share of the national income declined for the first time in decades.[19] Real income per capita during the 1980s was flat and has been in decline since 1990. "Factors contributing to this trend include: a relatively high unemployment rate since 1990; a changing job structure of less high-paying and more low-paying jobs and occupations; a slippage in the educational levels of some segments of the labor force; [and] growth in the younger, nonworking population."[20]

The Current California: Employment and the Economy

In 1989, the last year such figures are available, the gross state product of California was $697.4 billion.[21] Put in perspective, that would make the California economy much larger than that of Russia (1991 GDP: $479.8 billion) with one-fifth the number of people, or much larger than the economy of China (1993 estimated GDP: $436 billion) with one-fortieth the number of citizens.[22] Put another way, one would need to combine the economies of Argentina, Mexico and Australia to approximate that of California.[23] Or, combine 24 of the remaining 49 state economies in the U.S. to come up with one Golden State.[24]

Some key features of the California economy include:

- The principal industries are in agriculture, manufacturing, services and trade.
- The civilian labor force averaged 15,187,000 for 1992, representing a 2.39 percent increase (354,000) over 1991.[25] This labor pool dwarfs that of Canada (13,681,000).[26]

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[17] Ibid, p 79.

[18] CAL Facts, p. 1.

[19] Ibid.

[20] CAL Facts, p. 2.

[21] California Statistical Abstract, p. 49.

[22] The 1994 Information Please Almanac (Boston and New York: Houghton Mifflin Company, 1994), p. 249; Ibid., p. 166.

[23] Ibid., p. 146; p. 228; and p. 147.

[24] California Statistical Abstract, p. 201. [States cited: South Carolina, Iowa, Oklahoma, Oregon, Kansas, Mississippi, Arkansas, Nebraska, Utah, Nevada, West Virginia, Hawaii, New Mexico, New Hampshire, Maine, Alaska, Rhode Island, Idaho, Delaware, Montana, Vermont, North Dakota, South Dakota and Wyoming.]

[25] California Statistical Abstract, p. 22.

[26] Almanac, p. 161.

California's non-farm employment is comprised of 57 percent in the service industry, about 16.5 percent in manufacturing and a little more than 16 percent in government.[27]

- The unemployment rate rose to 9.1 percent in 1992, adding 263,000 to a total civilian unemployment of 1,382,000.[28] Throughout 1993 and early 1994, the rate has been very volatile--last posting an 8.6 percent rate for March 1994.[29]

- California's payroll employment has veered toward services, mimicking the trend of the last decade nationally where low growth or employment declines have transpired in "goods" sectors while high growth has occurred in "services."[30]

- California was the number one state in the nation in 1992 in terms of business failures per 10,000 concerns: 169 (the national average was 110).[31] More than 43,000 businesses went under between 1991 and 1993.[32] Conversely, this bad news has a bright side. California's struggle has a Darwinistic aspect: surviving companies are battle-tested and lean. California has more new and fast-growing companies than any other state. A Massachusetts economic forecasting firm called Cognetics attempts to identify what it refers to as "gazelle" companies. These are businesses doubling in size between 1989 and 1993. In all, California had 33,263 gazelles--nearly double the closest competitors, New York and Texas.[33]

- California's agricultural industry is the breadbasket to the world: worth nearly $18 billion in 1991, over 50 percent larger in output than its nearest U.S. competitor--Texas.[34]

- California has the nation's strongest manufacturing base, adding $145 billion to the state's economy in 1991--a 78 percent larger output than its nearest U.S. competitor (New York).[35] The California aerospace and electronics industry, also the nation's largest, had over 495,000 employees as of March 1994 and had an economic output of about $48 billion.[36]

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[27] "Working Paper #1B/A Region of Contrasts," p. 30.

[28] California Statistical Abstract, p. 22.

[29] Labor Market Conditions in California, (Sacramento: California Employment Development Department, April 1994), p. 1.

[30] CAL Facts, p. 3.

[31] Statistical Abstract, p. xxii.

[32] Jonathan Peterson, "Bouncing Back with a Twist," The New York Times, May 2, 1994, p. A22.

[33] Ibid.; Corporate Almanac, 1994, (Cambridge, Massachusetts: Cognetics, Inc., 1994,) p. 76. This study reports that 20 percent of these fast-growing companies employ between 1-4 workers, 51.6 percent employ between 5 and 19 workers, and 22.8 percent retain between 20 and 99 employees. So, about 95 percent of these firms are the epitome of the small business, employing less than 100 workers.

[34] Ibid., p. 96.

[35] California Statistical Abstract, p. 200.

[36] Labor Market Conditions in California, pp. 9-10.; 1991 Annual Survey of Manufacturers (Washington, D.C.: United States Department of Commerce, November 1992), p. 2-29. While this industry is very important, it is in what appears to be an irreversible tailspin--resulting in hundreds of thousands of job losses since the late 1970s and the recent relocation of the downsized, remaining companies to lower cost of business states. See "Impact of Defense Cuts: An Update," (Sacramento: Commission on State Finance, May 1993) and Impact of Defense Cuts on California (Sacramento: Commission on State Finance, Fall 1992).

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- Trade has long been a California mainstay. In 1993, California exported $70.3 billion in goods to foreign countries, which accounted for roughly about one-sixth of the United States exports.[37] The top ten foreign markets for California in 1993 were: 1) Japan--$10.5 billion; 2) Canada--$7.7 billion; 3) Mexico--$6.5 billion; 4) Taiwan--$4.7 billion; 5) Korea--$4.1 billion; 6) Singapore--$3.7 billion; 7) Germany--$3.5 billion; 8) United Kingdom--$3.5 billion; 9) Hong Kong--$3.0 billion; and 10) France--$2.2 billion.[38]

In early 1990, the nation--and California--entered the most serious of the post-World War II recessions. The nation started to rebound from this severe downturn in the spring of 1991, and the upswing has expanded slowly into a national economic environment of optimism for long-term low inflation, low interest rates, rising profits and sustainable real GDP growth. Three years later, however, opinion is divided as to whether California is still in recession. Parts of California were beset very hard while others were not. Some industries took devastating hits while others did not. Most economic forecasts have predicted a weak 1994 with variations in speculation on the overall recovery. The Legislative Analyst Office (LAO) projected no significant growth until late 1995 or early 1996;[39] the Department of Finance (DOF) predicted early 1995;[40] and the now-defunct Commission on State Finance (COSF) projected late 1994.[41]

Reasons for the persistence of the California recession in the face of a national recovery vary with the source. LAO pointed to a complex set of factors: manufacturing, employment and new housing starts will not upturn until 1995, while the continued drag of federal defense cuts, weak export trade growth, heightened foreign competition, and continued company downsizing looms.[42] DOF is more unequivocal in its assessment, claiming California suffered three years longer in the recession than the rest of the nation for two reasons: 1) so much of the state's economy was dependent on the aerospace industry; and 2) that industry went into a sharp nose-dive because of large federal defense spending cuts.[43] (Indeed, California is pre-eminent among the states in defense-spending, accounting for $99.3 billion in direct and indirect spending--Virginia ranks second at $38.4 billion. California lost 60 percent of all eliminated defense jobs nationwide as a result of the first two rounds of base closures.)[44] Finally, COSF tended to side more with the complex circumstances cited by LAO to explain the persistence of the California recession. According to COSF, California is undergoing fundamental restructuring of its economy--falling real estate values, a permanent decline in the aerospace industry, and a general reconfiguration of the structure of work in the delivery of goods and services.[45]

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[37] 1993 California Export Figures (Davis, California: O'Connell Associates, March 1994), p. 1.

[38] Ibid.

[39] The 1994-95 Budget: Perspectives and Issues (Sacramento: Legislative Analyst's Office, February 1994), p. 34.

[40] Governor's Budget Summary 1994-95, (Sacramento: California Department of Finance, January 1994), p. 84. Also, see "May Revision: Governor's Budget, 1994-95," (Sacramento: California Department of Finance, May 1994). "There is growing evidence that California is showing signs of an economic turnaround, and the May Revision forecast is revised up from the January Budget forecast." (p. 3.)

[41] "California Budget Outlook: A Staff Update to the Commission," (Sacramento: Commission on State Finance, December 1993), p. 8.

[42] Perspectives and Issues, pp. 32-38.

[43] Governor's Budget 1994-95: Charting the Course for California's Future (Sacramento: California Department of Finance, January 1994), p.11.

[44] California Fiscal Reform: A Plan for Action-- Task Force Member Reports, (Oakland, California: California Business-Higher Education Forum, May 1994). p. 3.

[45] "California Budget Outlook," pp. 7-8.

Up until recently, the UCLA Business Forecast echoed the doom of other prognostications. However, in its quarterly report released in March, 1994, the Forecast announced that the infusion of $14 billion in federal disaster relief funds to address the infrastructure damage of the Northridge earthquake, coupled with the robust national recovery had lifted California from the recession.[46] Caution has been raised by those concerned that California's structural problems will remain, though, when the federal funds dry up--leaving recession again.[47]

The California Business-Higher Education Forum, through their work entitled California Fiscal Reform: A Plan for Action, predicts that international trade and the recovery of the construction industry will end the recession.[48] It will be a recovery moderated or slowed by three powerful forces: 1) the lingering impact of the 1990-94 recession, with "signs of broad recovery" not to appear before 1995; 2) the continued industry downsizing--and continuing permanent job losses, even though we're no longer in the throes of recessions as a result of the "new economy;" and 3) net migration to California will decline dramatically from 1980s levels (perhaps because jobs will be created at a much slower rate).[49]

While the California economy bottomed out, the national economy has been on fire--demonstrating growth rates not seen in years. So strong is the national economy that the Federal Reserve Board is concerned about growth igniting inflation. Their tonic--increasing short-term interest rates for the fourth time this year--may work for the rest of the country, but it could be disastrous for California. Such increases will escalate mortgage rates and slow down the housing market. Also, higher interest rates will dampen consumer spending and business investment activity in other states, cutting demand and closing markets that California goods and services need to rebound. For still anemic California (not even taking into account that the federal government has proposed closing 22 military bases in California and most of those closure have yet to transpire), this could send the state back into recession. Even if this does not occur, the impact of the 1990-94 California recession will be long-term.

Since 1990, California has lost some 868,000 jobs--the equivalent of everyone in the entire workforce in Nevada (641,000) and Alaska (247,000) being fired.[50] Although California comprises 12 percent of the U.S. population, it has endured about 30 percent of the jobs eliminated nationally during this recession.[51] Unlike previous California recessions of 1969-70 and 1981-82 (where job losses were confined largely to the manufacturing and construction industries), these recent job losses have also occurred in every industry. And the jobs--which were frequently high-paying like the 150,000 jobs lost in the aerospace industry--will likely never return. "Unlike previous recessions, where workers were laid off and then rehired when factory orders returned to pre-recession levels, most of the job losses in the current recession are permanent."[52] Some attribute as much as two-thirds of the job loss to

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[46] The UCLA Business Forecast for the Nation and California, (Los Angeles: UCLA Graduate School of Management, March 1994), p. California-2 1.

[47] Treading Water in a Sea of Recovery, (Sacramento: Senate Republican Caucus, April 1994). p. 6. For an opposing view regarding California's problems, see David Bowman, et al., "Structural Deficit," p. 48. "The finding that the state recession is localized by region and industry challenges much current wisdom concerning the causes of California's economic problems. If northern California is able to outperform the nation while southern California is suffering a severe downturn, it is difficult to accept arguments that state policies (e.g., taxes, workers' compensation, etc.) are the major cause of southern California's problems."

[48] California Fiscal Reform, Recommendations and Summary, p. 10.

[49] Ibid., pp. 9-12b.

[50] Charting the Course, p. 10.; California Statistical Abstract, p. 198.

[51] Treading Water, p. 1.

[52] Charting the Course, p. 10.

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corporate downsizing and project that this trend will continue into the later half of the 1990s, resulting in another 200,000 permanent job losses.[53] Intensifying the situation, higher-paying jobs that have been eliminated will likely be replaced by lower-paying jobs in different industries.

Yet, despite such gloom, there is general consensus that the long-term prospects for California are good.[54] "After a period of stabilization and weak growth over the next couple of years, the California economy should start showing some significant strength as we enter the latter half of the decade, with total payroll employment growing in the 2 percent to 2.5 percent range each year and real personal income increasing by over 3 percent annually. Even at these growth rates, it will take five to six years for the level of total California nonagricultural employment to regain its 1990 pre-recession peak."[55]

As stated above, new home construction will play a very significant role in the vigor with which the California economy recovers in the next several years.[56] Complicating the situation is the roller-coaster nature of housing prices in California. High-end housing prices in Los Angeles have declined by 30 percent--the steepest loss since the highly-speculative 1920s.[57] Not only does this industry determine construction employment, it determines sales in related industries producing building materials, and directly impacts the assets of both homeowners and investors. All of this is very cyclical and dependent on people who need housing (demand), and affordability (speculative pricing in the 1980s placed average California housing out of an affordable range). Of course, people need jobs to buy houses. The more houses built, the more jobs will be created. "Beginning in early 1995, moderately rising home prices in California--combined with more affordable price levels, low mortgage rates, stabilized employment levels and rising real incomes--are expected to spur a significant upturn in the single-family home building sector."[58]

Underlying the prospects for a slow recovery is a general consensus that the social and economic polarization of California--the haves and the have-nots--will be exacerbated.[59] "For at least the foreseeable future, California is likely to have a highly fragmented economy, and along with it a fractionated society. Certain segments of the economy, and certain geographic regions, will do well while others continue to decline. And the effects, both negative and positive, will vary greatly depending on ethnicity, age, education and other social factors."[60] Given the impact on growth and

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[53] California Fiscal Reform: A Plan for Action/ Recommendations and Summary, (Oakland, California: California Business-Higher Education Forum, May 1994,) p. 3.

[54] California Economic Growth (Palo Alto, California: Center for Continuing Study of the California Economy, 1994), p.1-3. "The California economy has strong long term growth potential. Growth in jobs and income will be led by four emerging sectors of the state's economic base--foreign trade, high technology, tourism and entertainment, and professional services. Each sector has above average growth prospects in world and national markets and is an area of strength in the California economy."

[55] Perspectives and Issues, p. 39. In David Bowman, John Ellwood, Frank Neuhauser, and Eugene Smolensky, "Structural Deficit and the Long-Term Fiscal Condition of the State," California Policy Choices, Vol. 9, (Los Angeles: University of Southern California, 1994,) p. 37-44., Bowman et al maintain that the 1990-94 recession resembles the business cycle of 1965 to 1973 pulling out of another recession. While growth rates returned to normal, the state's share of employment and income remained permanently ratcheted below what they would have been had no recession occurred. Extrapolating to the 1990-94 recession, they believe that trend will be mirrored in the current situation. "Using our model, we estimated that in the year 2000, wage and salary employment will be 1.11 million lower, personal income will be $63.8 billion lower (in 1992 dollars), state population will be 1.88 million lower, and the unemployment rate will be 0.5 percentage points higher than would have been the case had the current recession not occurred." (p. 42.)

[56] Perspectives and Issues, pp. 36-37.; "California Budget Outlook," pp. 8-9.

[57] California Fiscal Reform, p. 9.

[58] Perspectives and Issues, p. 38.

[59] Walters, Dan. The New California, pp. 11-21.

[60] Walters, Dan. "Has California Bottomed Out?" Sacramento Bee, April 3, 1994, p. A3.

productivity as pointed out in recent economic studies, the growth in disparities will cause mounting economic problems, even beyond social concerns about opportunity and fairness.

21st Century California: Population

Now that the salient characteristics of today's California have been established, we can turn our eyes to the future. What will California look like in the next century? For one thing, the state's tradition of population growth will continue. Obviously , however, with the economic devastation of the recession, previous population projections are somewhat askew. Again, its cyclical: job layoffs may mean less people and less people will mean fewer jobs.

DOF has projected the state's population in 1995 at 33.4 million and 36.3 million in 2000, an increase (6.3 million) which would exceed the 1980s phenomenal growth (6.2 million).[61] The Center for the Continuing Study of the California Economy forecasts 36.1 million Californians in the year 2000.[62] The Commission on State Finance predicts a state population of 34.7 million in 1995, rising to 38.8 million as the 21st century begins.[63]

DOF projects that this growth will be uneven across age groups and that this occurrence will change the face of the California population and its workforce. The group from birth to age 17 will increase by nearly 2.5 million (40 percent of the 1990-2000 total increase) and will comprise 28 percent of the population.[64] The number of older workers (although only accounting for 11 percent of the total population in 2000) will also rapidly expand. The number of people between ages 40 and 60 will increase more than 50 percent in the coming decade.[65] "The number of younger adults--those in their mid-twenties to mid-thirties--will decline over the next ten years, and the average age of California's working-age population (18-64) will increase from 38 to 40."[66]

Another factor taking on greater importance will be growth resulting from a natural increase in the state's residential population. Historically, the greater increase has occurred because of people migrating to California from either other states or foreign countries. In fact, in the decade from 1980 to 1990, 54 percent of the total growth came from migration while 46 percent resulted from natural increase. In the decade from 1990 to the year 2000, natural increase will account for 51 percent of growth while 49 percent will come from migration.[67]

Continuing the current trend toward diversity, California will become the first state where the majority is a plurality of minorities. "Between 1990 and 2005 Latinos will add almost 6 million to the state's population and Asians will add 2.2 million, which together account for 93 percent of the total increase."[68] At least four out of every five new Californians in the 1990s will be Asian or Hispanic.[69]

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[61] Charting the Course, p. 27.

[62] California Population Characteristics, (Palo Alto: Center for the Continuing Study of the California Economy, 1992), p vi.

[63] "California Budget Outlook, A Staff Update to the Commission," p.18.

[64] Charting the Course, p. 27.

[65] Charting the Course, pp. 27-28; Also, CAL Facts, p. 10.

[66] CAL Facts, p. 10.

[67] Important Trends for California Community Colleges, (Sacramento: Research and Analysis Unit of Chancellor's's Office, April 1992), p.3.

[68] "California Budget Outlook," p. 18-19.

Both the Latino and Asian-American populations will increase at these rates of growth primarily due to high levels of foreign immigration and high birth rates.[70] "Caucasians will experience almost no growth during the forecast period, increasing less than 100,000 over the next 12 years. This stagnant growth is the result of high out migration and low birth rates."[71]

21st Century California: Income

DOF projections on personal income of Californians show a 3.9 percent increase for 1994 (after a .3 percent decline in 1993) and a 4.8 percent increase for 1995. In the decade from 1996 to 2005, growth in income will more closely approximate that of the 1980s. DOF projects a 7.2 percent average year-to-year increase over this time frame.[72] COSF predictions on income, made in December 1993 and projected through 1997, generally mirror those of DOF. This is true also for the UCLA Forecast. Outpacing inflation, income will average 5 percent from 1994 to 1996. "From 1990 through 1993, real personal income in California declined more than three percent. From 1994 through 1996, real income growth will average close to 2.5 percent per year."[73]

21st Century California: Employment and the Economy

The economy of California--and for the United States--is undergoing fundamental change. This new economy is, in the words of noted economist Anthony Carnevale, "founded on a new set of competitive standards that have transformed organizations, economic cycles, jobs and skill requirements."[74] It is a global economy where capital, resources and information travel fluidly without regard to local, state, or national identification or borders.

Historically, the economy and its growth depended on the industrialized nations (chiefly on the world's largest economy--the United States) where there was the largest market, the best-paid, most skilled workforce, and the best access to venture capital. New technologies and products started in the United States, and mass production techniques refined these to a simple system utilizing unskilled labor and standardized technologies. Once simplified, the product was "exported" to less developed nations while American industry moved on to new technologies and products. "In this hand-me-down system, the developed and undeveloped nations of the world moved in lock step up the development ladder. A rising tide in the developed world eventually raised all boats worldwide and did so without

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[69] Walters, Dan. The New California: Facing the 21st Century (Sacramento: California Journal Press, 1992), pp. 11-12. Also, Important Trends for California Community Colleges, pp. 3-4. "In 1992, California experienced a net domestic out-migration (e.g., Californians moving to other states) for the first time in 20 years. The domestic net out-migration is expected to be even larger in 1993 and will continue until California's economy recovers. The net migration out of the State is most pronounced among individuals aged 30 to 64. This age group has relatively high income and net worth. Domestic migration, which provided 18 percent of the growth in the 1980s, will probably have a negative effect in the 1990s," [Governor's Budget 1994-95: Charting the Course for California's Future, p. 28.]

[70] Ibid.

[71] Ibid.

[72] "DOF Extended Forecast", Faxed Chart (Sacramento: Department of Finance, 3/18/94), p. 2.

[73] UCLA Business Forecast, p. California-1.3.

[74] Anthony Patrick Carnevale, America and the New Economy (Washington, D.C.: The American Society for Training and Development and United States Department of Labor, 1991), p. i.

disrupting American superiority in the economic pecking order."[75] The new economy changed this situation; new circumstances created this new economy.

According to Carnevale, those circumstances are:

- The increasing wealth of nations [worker earned income has steadily increased];
- The globalization of economic activity [markets are increasingly worldwide];
- The diversification of taste [because the market is built upon competition, goods and services must be competitive--resulting in ever-changing variety and customization];
- The increasing value of human time [although income has risen, leisure time has fallen];
- The commercialization of free labor [scarcity of leisure time has fostered new products and services to assist in household chores or make personal time more efficient];
- The increasing participation of consumers in production and service delivery [organizations are more customer-focused, allowing them to better tailor products or services to needs and, thus, also allowing them to be more competitive]; and
- Technical advances [flexibility has increased in work processes for production and in the technology itself].[76]

Traditionally, mass production was the route to competitive success. New standards for competition, says Carnevale, are emerging. The first such standard is the need for robust productivity and new approaches on how to achieve it. Increases in productivity are what has allowed the American worker a rising standard of living. Had productivity fallen after World War II, so too would have the standard of living. All this makes pursuit of ever-expanding ways to increase productivity tremendously important and in direct correlation to how well we live. "In the old economy, white-collar and technical elites increased productivity principally by rationalizing organizations, mechanizing work processes, and reducing personnel costs by using fewer or cheaper employees."[77]

Resources and decision-making authority under the old economy were concentrated at the top of a very hierarchical organization to avoid waste and reduce costs. According to Carnevale, in the new economy, this access to authority and resources will need to occur at the point of production and service delivery and at the interface with the customer if the organization is to compete. "Increasing productivity by reducing costs results in lean organizations, narrow-purpose technologies, and unskilled workforces that are cheap but too inflexible and anemic to respond to the new, broader set of competitive requirements...In the old economy, organizations, technologies and workforces are targets for cost reduction--in the new economy, they are resources to be developed in order to add value."[78]

The second new standard for Carnevale are flexible volumes. Under the American mass production economy, conventional wisdom held that increased standardization and higher volumes drove production costs down, whereas greater product or service variety and lower volumes forced costs up.

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[75] Ibid., p. 19.

[76] Ibid., pp. 15-23.

[77] Ibid., p. 34.

[78] Ibid.

A dilemma emerged: to be competitive, lower production costs meant lower consumer prices, but lower prices could mean lower profit margins for the producer. For the Europeans and Japanese under the old economy, a different challenge existed. Their domestic markets were small (no opportunity for high volume production) and their wide-flung foreign markets required product diversity. The resolution was to make more flexible use of labor, machine, and organizational capital, resulting ultimately in customization. "Variety becomes customization as a production or service institution becomes more flexible and products or services sold come close to being one of a kind."[79]

The third new market standard is speed. "The need to shift from product to product or to vary products without losing productivity forces a focus on speed."[80] Under the rigid structure of the old mass production economy, long lead times were required to change direction or product flow. Such lead times cost capital, reduce the producer's responsiveness to markets, and encourage a dangerous reliance on often erroneous demand forecasts. To achieve speed, things must change. "Top-down hierarchies and inflexible, isolated organizations are being replaced by flexible networks in which hierarchies are flattened; companies are sharing the cost of research, human resource, and technological development; and production decisions are being pushed down the (production) line to work teams that make the products and serve customers."[81]

The fourth factor, according to Carnevale, is affordable quality. "The quality standard has become the emblem of the new competitive framework. Experience teaches that pursuing quality invariably improves performance on a host of competitive standards."[82] From this standard, the Japanese have taken the lead, adapting Demming's Total Quality Management system to new product and service development with stunning results.

Finally, the fifth aspect is customer focus. Here the emphasis is on making the product or service as convenient to the customer as possible.

It is under this general rubric of a changing economy and society that California's future profile will evolve, according to most economists nationwide. How does this speculation correlate to California's planning for the future? Overall, LAO is projecting significant economic growth for California during the later half of 1990s. This outlook is, however, predicated on a rebound in the commercial and residential housing industry (starting in 1996), as well as an upswing in manufacturing employment around 1997.[83] DOF forecasts an even stronger employment picture: an average annual year-to-year growth in nonagricultural employment of 2.68 percent, although unemployment is projected to remain above 9 percent until 1997 and then level off slowly to 5.5 percent in 2005. But, the California that emerges like the phoenix from the economic fires will differ markedly from the California of before:

- Global competition and the integration of markets will heighten intense volatility and business rivalry for an increasingly value-conscious consumer;
- The economy will increasingly depend on technology and service enterprise to sustain growth;

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[79] Ibid., p. 35.

[80] Ibid.

[81] "Working Paper #2/ Exploring the Relationship: A Survey of the Literature on Higher Education and the Economy," Higher Education and the Economy of the West (Boulder, Colorado: Western Interstate Commission for Higher Education, November 1992), p. 7.

[82] Ibid., p. 36.

[83] LAO, Perspectives and Issues, p. 40.

- Immigration will be fast-paced, injecting vigor and diversity but also raising the challenge to equip poorly trained or educated workers; and

- Quality of life concerns will need to be addressed to placate concerned employers and employees.[84]

As the economy changes, so will the nature of work:

- Workers will need increasingly higher levels of education and workplace skills;

- Work will become more egalitarian: rank-and-file workers will have an ever-increasing role in decision-making and strategic planning;

- Work will be group-oriented (using varied skills across the company in a "team" effort, like quality circles or total quality management groups) or on your own, like the cottage work of the pre-Industrial Revolution days;

- Workers will change jobs frequently and a premium will be placed on the ability to adapt quickly to new ideas and methods;

- Part-time work, temporary work and self-employment will rise as employers slash their permanent workforce and reduce costs to improve their competitiveness;

- Real hourly pay will be flat and there will be an ever-increasing earnings gap between higher-paid, better educated workers and those with lower pay and less education;

- For the next decade, there will likely not be enough jobs as companies downsize and young entrants into the job market likely encounter wage deflation, where their starting salaries are 10-20 percent less than similar jobs have paid in previous years.

- Company organization will become more horizontal and there will be less bureaucratic structure. Well-run businesses, even those employing tens of thousands, will have no more than 5-6 levels between entry employees and CEO, which means fewer "mid-level" jobs and greater polarization between higher skill/paying jobs and lower skill/paying jobs;

- The average age of the population and the workforce will increase as the number of young workers decreases;

- More women, minorities and immigrants will assume an ever-larger share of the labor market; and

- Rise in single-parent households and households where both parents work will foster greater need for day care, flexible scheduling and work at home.[85]

Companies will increasingly resemble ones such as Applied Materials, Inc., an Austin, Texas firm set up to develop a 21st century manufacturing approach to production of computer chips. "Everyone

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[84] "Bouncing Back With a Twist," p. A1.

[85] Workforce 2000, (Indianapolis, Indiana: Hudson Institute, June 1987), pp. xiii-xxi; "Bouncing Back with a Twist," p. A1, A22-A24; Massimo Calabresi, et al., "Jobs in an Age of Insecurity," Time, November 22, 1993, pp. 32-39; Robert Reinhold, "Humbled by Mean Recession, California Fights for Its Jobs," The New York Times (National Edition), December 19, 1993, p. 1, 16-17. "Fact-finding Report/Executive Summary," (Washington, D.C.: Commission on the Future of Worker-Management Relations, May 1994,) pp. 1-3.

Applied hires has a college degree, often in engineering or physics (though one of its 400 workers was trained in fine arts). All are expected to spend 20 percent of their time on research and development, continually finding ways to change or even eliminate the manufacturing process that takes the other 80 percent of their time. Says company spokesman Steve Taylor on Applied's philosophy: 'We actually want you to figure out a way to eliminate your job. We won't fire you; we'll find a better job for you to do.'"[86]

Higher Education's Role in the Economy and Society

In the context of California's changing needs, what is the role in the economy and society that higher education should play. How do these needs correlate with the Master plan? Why should higher education be a priority?

"The role of education is much broader than its role in the economic system; it has a cultural and political role as well. As a culture we value individuals, so education is charged with creating individualism in Americans. As a political system we value participation above all else, and education is charged with creating people who can effectively participate in American institutions. It is only recently that the economic value of persons has been a question of any national interest at all, probably because the economy has performed less well than it ought to."[87]

Nowhere is the tie--both now and in the future--between education and the economy more prominent than in the work of Peter Drucker. More traditional thinking identifies the link as the increased future demand for higher skill levels for all workers, a demand that only education can fill.[88] In Post-Capitalist Society, Drucker argues that every several hundred years society undergoes a fundamental restructuring that changes its every aspect.[89] He contends that one such transition is now occurring: from the age of capitalism, the nation-state and a mass production economy to the knowledge-based society constituted by organizations and knowledge workers.[90] According to Drucker, this transformation started with the G.I. Bill of Rights after World War II[91] and will not be completed until 2010 or 2020.[92]

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[86] "Jobs in an Age of Insecurity," p. 38. Applied spends up to $5,000 per employee per year on continuing education.

[87] "The Future of Higher Education," (Denver, Colorado: Western Interstate Commission for Higher Education, December 1985), p. 22.

[88] "Working Paper #2/ Exploring the Relationship," p. 7.

[89] Peter Drucker, Post-Capitalist Society (New York: HarperBusiness, 1993), pp. 1-4.

[90] Also, see Taichi Sakaya, The Knowledge-Value Revolution, (Tokyo: Kodansha International, 1991.)

[91] Ibid., p. 3. "My own candidate (e.g., for the beginning of the transition to a knowledge society) would be the American G.I. Bill of Rights after World War II, which gave every returning American soldier the money to attend a(n) university--something that would have made absolutely no sense only 30 years earlier at the end of World War I. The G.I. Bill of Rights--and the enthusiastic response to it on the part of America's veterans--signaled the shift to the knowledge society. Future historians may well consider it the most important event of the 20th century."

[92] Ibid., p. 3

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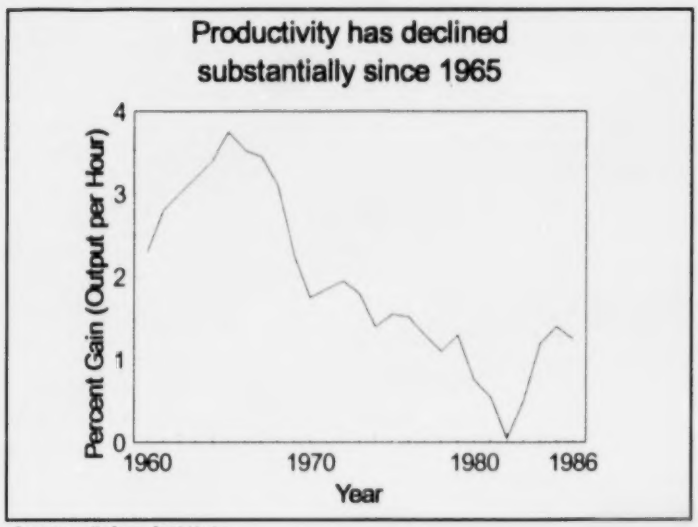
Drucker uses Marxist structures to describe capitalism. Two social classes (the capitalists, who owned and/or controlled the means of production, and the workers, who were the exploited class) operating the means of production (capital, land, and labor).[93] In the knowledge society, the classes will be knowledge workers and service workers (divided by education) and the means of wealth will be knowledge and its manipulation.[94] This change will place a central role in the economy on higher education and its traditional functions: teaching (knowledge transfer), research (knowledge discovery) and public service (knowledge application).[95] It will also create critical and new requirements of higher education in terms of the health of the economy through the need to raise productivity. A rise in productivity is defined in economic terms as a gain in the number of outputs per unit of input, provided the quality of the outputs does not decrease. Indeed, the economic challenge of the knowledge society will be to improve productivity, allowing for a continuation of the rising standard of living.[96] Productivity, as discussed above, provides the basis for an improved standard of living and quality of life. It is this productivity challenge which catapults higher education in the emerging 21st century into a pivotal role in the health and vitality of society and its economy.



Source: Hudson Institute

According to Drucker, prior to the nineteenth century, work as considered beneath educated people. The only way a worker could produce more--and thereby raise the living standard--was to work longer hours or work harder. The application of knowledge to work, pioneered by Frederick Taylor at the beginning of the 20th century, allowed for work to be reduced to a series of simple repetitive motions, setting up the basis for the mass production economy and the assembly line.[97] That occurrence, which according to Drucker allowed productivity to increase some fiftyfold in all advanced countries (although historians have given credit to technology and access to venture capital), provided the basis for the increased purchasing power and leisure time of the modern worker.

While the United States is still the most productive country in the world, productivity growth--for reasons still unknown--has declined sharply since about 1973. From 1959 to 1972, output per hour worked (labor productivity) marched upward at an annual rate of about 2.8 percent. From 1972 to 1977, the rate slowed to 1.6 percent. And from 1977 to 1987, it dropped to 1 percent. By the late 1980s, it had stopped dead in the water.[98] These seemingly modest changes compound into

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[93] Ibid., pp. 4-6.

[94] Ibid., p. 20.

[95] "Policy Recommendations/ Meeting Economic and Social Challenges: A Strategic Agenda for Higher Education," Higher Education and the Economy of the West (Boulder, Colorado: Western Interstate Commission for Higher Education, October 1992), pp. xi-xv.

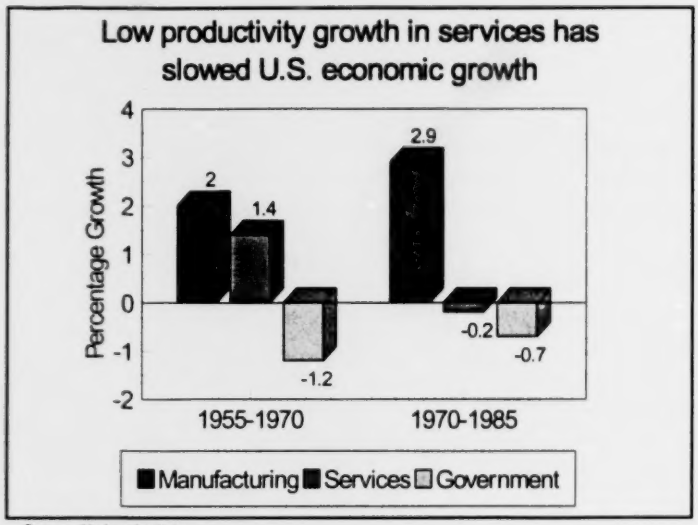
[96] Ibid., p. 38-40.

[97] Ibid., pp. 34-35.

[98] Workforce 2000, pp. 38-39.

significant socioeconomic problems: at a 2.5 percent growth rate, the economy would double in 28 years but at 1 percent it takes 70 years.

Drucker maintains that productivity is stalled because we are in transformation. "Forty years ago, in the 1950s, people who engaged in work to make or move things were still a majority in all developed countries. By 1990, they had shrunk to one fifth of the workforce. By 2010 they will form no more than one tenth. Increasing the productivity of manual workers in manufacturing, in farming, in mining, in transportation, can no longer create wealth by itself... From now on, what matters is the productivity of non-manual workers. And that requires applying knowledge to knowledge."[99] This is the crucial role of higher education in the 21st century: to provide the means to increase productivity, and, thereby, create wealth to reduce social tensions between the knowledge workers and the service workers.[100]



Source: Hudson Institute

How does this role correlate to the Master Plan? As Carnevale points out, education fills several roles in society. The 1960 blueprint, which became the Master Plan for Higher Education, sought to define those roles. This plan evolved over time to rest on three key assumptions: 1) every eligible Californian is entitled on an equitable basis to a state-funded higher education [open and equitable access]; 2) the system should seek to attain and retain an outstanding academic reputation [quality]; and 3) student contributions to the cost of such education through fees should be low [affordability].

Built on these concepts of access, equity, quality and affordability, the California system of higher education has been able to produce three results in which there is a strong state interest. Firstly, the system has advanced the individual and provided for personal growth. Secondly, the system has educated the individual to participate in society's institutions and therefore provided for social mobility. Lastly, through an education it has given workers a higher wage and greater control over their financial future, providing for economic security.[101]

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[99] Ibid., p. 40

[100] See remarks of John Wilson, "The Value of Research and Education in California," (Sacramento, California: Joint Meeting of the Regents of the University of California and the Trustees of the California State University, October 13, 1993,) p. 8. "Productivity accounts for one-half of the economic growth in California. And the most important means for enhancing productivity gains in California are investments in basic research and education."

[101] The value of higher education from a cost-benefit approach as a state government investment is couched in the literature as an investment that earns a return usually after 7-10 years. Over the course of a 35-40 year span constituting a worker's employment in the workforce, the estimated lifetime earnings of college graduates is nearly 40 percent higher than those of high school graduates. By paying taxes and contributing to the state's overall economy, college graduates who remain in California repay many times over the state support they received during their course of study. In Robert Girling's study on the impact of CSU (see below), he maintains that a college graduate will earn $1.2 million more over a lifetime in the workforce as opposed to a "non-college" graduate (pp. 34-38.)

The function of social mobility has profound implications. This report has documented the increasing fragmentation of California society into the "haves" and "have-nots." Some economists now believe that income disparity has a direct impact on economic growth and worker productivity, as pointed out earlier in this report.

Postsecondary education also serves, however, a critical social role in reducing this division, and it is a function that becomes ever more critical as California becomes the first state where the majority is minorities. Some argue persuasively, however, that this is perhaps the single area where the Master Plan has not performed as well. Tom Hayden, in his 1986 Beyond the Master Plan, wrote: "Since higher education has not coped particularly with such questions as minority access and retention in the past, there is no reason to believe that an 'education-as-usual' approach will accommodate the exploding needs of tomorrow."[102] In rebuttal, others might point out that higher education in this respect is dependent upon the success of the K-12 system.

In terms of economic mobility, Robert Reich has detailed what a college education means for an individual's place in the job market. Firstly, it means wage inequality. Weekly real earnings of full-time workers over the age of 25 and college graduates increased 9 percent over the years 1980-91, while weekly earnings of similar workers with only a high school diploma declined 7 percent.[103] Secondly, a college education means job stability. Although no one really has a stable employment situation in the volatile work environment emerging, 3.2 percent of college graduates were unemployed in 1992 as opposed to 11.4 percent of those who had dropped out of high school.[104]

Studies have also pointed out higher education's more direct impact in the economy as an "industry" and catalyst of economic activity. These approaches have usually employed a multiplier technique to quantify such impacts. In a 1984 study entitled The Wealth of Knowledge, the California Postsecondary Education Commission (CPEC) applied a multiplier of 3.5 to guesstimate an economic impact at that time of $28 billion in the California economy, or 7.9 percent of the state gross product (GSP).[105] This multiplier is high and probably overstated the direct economic impact of higher education. Usually a multiplier of around 2 is used. A 1993 study of the impact of CSU used a similar methodology, suggesting that CSU adds over $4.5 billion per year to the GSP and has a direct employment impact on some 90,000 jobs.[106] John Wilson has pointed out not only the value of education from the economic dimension of job creation, but also the critical value of basic and applied research in the information age.[107]

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[102] Tom Hayden, Beyond the Master Plan, (Sacramento: Assembly Subcommittee on Higher Education, March 1986,) p. 5. John Vasconcellos authored legislation in 1974 that set 1980 as the target date to overcome ethnic, economic and gender under-representation in higher education enrollment by at least matching the ethnic, economic and gender composition of recent high school graduates. Statistics illustrate the serious nature of this problem: 1) African-Americans represented 7.4 percent of the 1990 California high school graduates class but 4.0 percent of 1991-92 CSU degrees conferred and 3.9 percent of UC, and 2) Chicanos and Latinos constituted 23.3 percent of the 1990 high school class but 10.4 percent of CSU degrees and 10.1 of UC degrees. Asian-Americans and Pacific Islanders, however, persisted in much greater numbers: they made up 11.1 percent of the 1990 high school class but 11.7 percent of CSU degrees and 18.9 percent of UC degrees. To address these concerns, each segment has extensive early recruiting programs to improve diversity. For example, see "UC Pledges $1 Million for Diversity," Sacramento Bee, May 20, 1994, p. B5.

[103] Robert Reich, "Workers of the World, Get Smart," The New York Times, July 20, 1993, p. A19.

[104] Ibid.

[105] The Wealth of Knowledge, (Sacramento: California Postsecondary Education Commission, January 1984,) p. 1.

[106] Robert Girling, et al., Economic Impact of the California State University on the California Economy, 1993-2002, (Long Beach: California State University, January 31, 1993,) pp. 24-27.

[107] See "The Value of Research and Education in California," pp. 6-7. "Professor Medoff of Harvard has found that investment in education is the most important source of job creation of any possible area of public or private spending... For example, a million dollars spent on education will create 46 percent more jobs than will a million dollars spent on consumption. A million dollars spent on education will create jobs that pay wages and benefits that are 13 percent higher than a million

Certainly, American focus on higher education reflects this realization of its societal importance. Higher education by itself is a large enterprise. In 1992, governments and individuals contributed $115.7 billion to its operations.[108] As a nation, U.S. invests more of its gross domestic product in its colleges and universities than any other major industrial nation: 2.33 percent as opposed to .88 percent in Japan and 1.18 percent in Germany.[109]

While it is true that entrants into the workforce over the next decade will deal with scarcity of available jobs and wage deflation,[110] 18 of the 20 professions projected to be the most in demand over the course of the next decade will require a college education.[111] Having a college degree is and increasingly will be the ticket to a middle-class lifestyle.[112] And, higher education in the age of knowledge must regroup to prepare society for the concept of lifelong education. Peter Drucker believes that the advent of knowledge society brought this change about and will ratchet ever-upward the workplace's demand for an educated worker. He used his own personal experience to represent such evolution:

> "When I decided in 1926 not to go to college but to go to work after finishing secondary school, my father was quite distressed; ours had long been a family of lawyers and doctors. But he did not call me a 'dropout'. He did not try to change my mind. And he did not prophesy that I would never amount to anything. I was a responsible adult wanting to work as an adult...Some thirty years later, when my son reached age 18, I practically forced him to go to college. By 1958, 32 years after I had moved from high school graduate to trainee in an export firm, a college degree

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dollars spent on consumption." Also see Valuing UC Agricultural Research and Extension, (Davis: Agricultural Issues Center/University of California, 1994.) Report concludes that California receives about a 20 percent return on every dollar spent on agricultural research.

[108] Thomas Mortenson, "Restructuring Higher Education Finance: Shifting Financial Responsibility from Governments to Students," (Iowa City, Iowa: Paper presented at Eleventh Annual Financial Aid Research Network Conference of the National Association of State Scholarship and Grant Programs and the National Council of Higher Education Loan Programs, April 7, 1994,) p. 2. Mortenson extrapolated these figures from national income and product accounts as collected and reported by the federal Census Bureau. According to Mortenson, state and local governments supplied 47 percent of higher education's funding in 1992, individuals contributed 44 percent and the federal government provided 9 percent. These percentage shares have undergone significant shifts over time.

[109] Financing Higher Education: Current Patterns, (Paris: Organization for Economic Cooperation and Development, 1990,) p. 90. Mortenson, in "Restructuring Higher Education Finance," reports a slightly lower figure (1.92 in 1992) but still leading other industrial nations in terms of investment. (p. 5.)

[110] See John Greenwald, "Bellboys with B.A.s," Time, November 22, 1993, pp. 36-37. JOB SCARCITY: "The bellboy-B.A. phenomenon should surprise no one at a time when countless corporations continue to downsize. According to a Labor Department study released last year, 30 percent of each new crop of graduates between now and 2005 will march straight into the ranks of the jobless or the underemployed. That would represent a hefty--and dispiriting--increase over the 1984-90 period, when an average of 20 percent of each graduating class promptly became 'underutilized.'" WAGE DEFLATION: "To make matters worse the twenty something graduates entering the workplace stand to earn less in inflation-adjusted dollars than their boomer counterparts did a generation ago. Starting pay for new liberal-arts graduates now averages $27,700 a year, according to a Northwestern University annual survey; that falls short of the adjusted entry-level earnings of $28,500 in 1968."

[111] Dana Hawkins, "Hot Tracks in 20 Professions," U.S. News & World Report, November 1, 1993, pp. 106-112. The two professions not requiring some postsecondary experience were home care aide and travel agent. Those requiring college education were tax accountant, sales and marketing specialist, systems analyst, target marketing expert, bilingual-education teacher, computer software engineer, environmental engineer, clinical laboratory technician, information broker, insurance claims adjuster, environmental lawyer, cable ad sales representative, geriatrician, specialist in a profession (accounting, engineering or management consulting firms contract specialist to develop high profile project for firm to become involved with), business services sales representative, protein chemist, employee assistance counselor, and telecommunications manager. See Projections of Employment (California 1990-2005), (Sacramento: California Employment Development Department, December 1993,) pp. 8-19 for graphics and data relating to industries projected to have the largest job growth and decline, as well as the fastest growing and fastest declining industries in California.

[112] John Immerwahr, The Closing Gateway: Californians Consider Their Higher Education System, (San Jose, California: California Higher Education Policy Center, September 1993), p.1.

had become a necessity. It had become the passport to careers...My father did not have the slightest difficulty in finding a trainee job for me in a reputable merchant house. Thirty years later, such firms would not have accepted a high school graduate as a trainee; they would all have said, 'Go to college for 4 years--and then you probably should go to graduate school."

These marketplace realities have certainly had an impact on educational attainment. In 1960, only 41.1 percent of the population had completed 4 or more years of high school and only 7.7 percent had a similar amount of college.[113] In 1992, those rates had increased to 79.4 percent and 21.4 percent respectively.[114] And the need for more education will only grow.[115]

Businesses also recognize the value of strong university systems as we enter the information age. As jobs fluctuate in difficult economic times, state legislatures are feverishly cutting corporate taxes and offering a panoply of tax incentives, despite evidence that these approaches are not determining factors in corporate location decisions.[116] David Birch, who has studied why and where jobs and economic growth occur, finds that companies are not as concerned about taxes or the cost of labor as they are about good universities, strong infrastructure and pleasing quality of life.[117]

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[113] Statistical Abstract, p. 154.

[114] Ibid.

[115] As the economy becomes more globalized and integrated, higher education will also play a crucial role in the development of foreign language capabilities of potential workers through study abroad. Immersion in the culture is the best means of improving these skills. But the United States must improve on the numbers of students undertaking such study: only 71,000 American students are in credit-hour programs abroad as opposed to over 440,000 foreign students enrolled here.

[116] Roger Wilson, State Business Incentives and Economic Growth: Are They Effective (Lexington, Kentucky: The Council of State Governments, 1989,) p.22. On tax cuts: Steven Gold, "The Season for Cutting State Taxes is Here," State Fiscal Briefs (Albany, New York: Center for the Study of the States, March 1994,) pp. 1-4. Other states are cutting taxes because their economies have improved, resulting in greater revenue to government and about $5 billion nationwide in state treasury surpluses. In California, these actions are under consideration for largely anecdotal job competition reasons. See Jonathan Marshall, "Job Growth in Manufacturing in Doubt," San Francisco Chronicle, June 14, 1994, p. B3. "California politicians who dangle special tax breaks or other incentives to lure manufacturers may be pursuing an assembly line to nowhere." In Tom Redburn, "States Putting Taxes on Chopping Block," San Francisco Chronicle (reprinted from New York Times), March 18, 1994, p. A16. New Jersey's effort to cut state income tax rates by 30 percent have caused contiguous states to be concerned about their competitiveness on jobs, Michigan's effort to shift K-12 funding from the property tax to a sales tax base, and multi-state budget surpluses from a greatly improved national economy are the driving forces behind tax cuts. Also, see Auturo Perez and Corina Eckl, State Fiscal Outlook for 1994 (Washington, D.C.: National Conference of State Legislatures, January 1994.) "Since the recession of the early 1990s, states have had to contend with both sluggish revenue growth and expenditure overruns. The information presented here suggests that this double-edged problem has eased considerably." (p. 2.) Conversely, Treading Water in a Sea of Recovery recommends a different approach to attract jobs and business: "Reforming regulatory practices which force businesses in some regions to run a 70-agency permit gauntlet is a must. State tax rates, now among the nation's highest, must be reduced. And though the (California) legislature addressed the issue of workers' compensation reform during the 1993 session, the work is incomplete." (p. 7.) For general economic development and job creation plans, see Willie Brown, Jr., A Vision for California-- A Work in Progress, (Sacramento: State Assembly, June 18, 1993.); Toward an ADEPT California (Sacramento; Assembly Democratic Economic Prosperity Team, 1992); California's Jobs and Future (Sacramento: Council on California Competitiveness, 1992); and At the Crossroads: Invigorating California's Rural Economy (Sacramento: Senate Office of Research, February 1993.)

[117] David Birch, et al., Entrepreneurial Hot Spots: The Best Places in America to Start and Grow a Company, (Cambridge, Massachusetts: Cognetics, Inc., 1993,) pp. 15-22. "The knowledge-value entrepreneur is not concerned about land, transportation and energy costs, or large pools of unskilled labor. His and her primary need is for skilled, knowledgeable people, and his or her location preferences are the location preferences of such people--who can now live where they please. Unlike modern agriculture and mass-production manufacturing, the economics of scale in knowledge-value are relatively low. In most cases, the equipment needs are few and equipment costs are dropping rapidly. PCs replace mainframes, telecommunications costs drop and communications equipment is inexpensive. The average size of the players thus drops, the number of significant players rises, the speed with which new players replace older ones increases and becomes more diverse." (p. 21.) Also, see editorial "Recipe for Job Growth," Sacramento Bee, September 28, 1993, p. B6. Finally, see Robert Reich, "The Real Economy," The Atlantic Monthly, February 1991, pp. 35-52. "Increasingly, educated brainpower--along with the roads, airports, computers, and fiber-optic cables linking it up--determines a nation's standard of living." (p. 37.)

"In a study of growing companies in Seattle, it was discovered that 70 percent of the companies had a direct, active role in the operation of the University of Washington. At one point, the two-thirds of a square mile next to MIT in Boston was creating more jobs than 13 states; it is still creating more jobs than 6 or 8 states, depending on the time period observed."[118]

Conclusion

All of these aspects of the Master Plan dovetail very well with the projected role of higher education in the 21st century--affording an even more powerful argument that higher education should be a top priority of California state government now and for the future. Not only does higher education have an important social function to provide personal growth, social mobility and economic security for the individual, it has the critical, emerging function in the information age of developing a means to restart productivity growth in the economy of the dawning 21st century.

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[118] Entrepreneurial Hot Spots, p. 15

Part II

THE PROBLEM: Can Higher Education Respond to California's Projected Need?

Despite California's compelling social and economic needs, a gradual but pronounced disinvestment of higher education funds has occurred. If state government does not reverse this trend, colleges and universities will not be able to live up to either the social promise of the Master Plan or the economic challenges of the future. Primary reasons for the state government's declining fiscal support during the past decade include: the budgetary aftershocks caused by Proposition 13, the recent economic downturn, and the phenomenal "caseload" growth of other state-funded programs. Money that might previously have gone into higher education has been increasingly relied upon instead as a "budget balancer."

Compared to the level of support by other states for higher education, California ranks below average--even though the state has the capacity to provide better funding. To supplement state support, colleges and universities have successfully utilized more private fundraising and research grants. The most publicized supplementary source, however, has been an increase in the fees charged to students. While these fees actually represent only a small portion of its overall budget, the pattern of large year-to-year hikes, if left unchecked, may lead to the effective privatization of higher education. Finally, emerging changes in the economy show that it is in the state's best interest to reverse the trend of disinvestment. Money invested on higher education enhances the whole society; whereas support for programs such as corrections have no bearing on productivity. Neither fees, fundraisers, nor grants can replace state funds as the backbone of the Master Plan.

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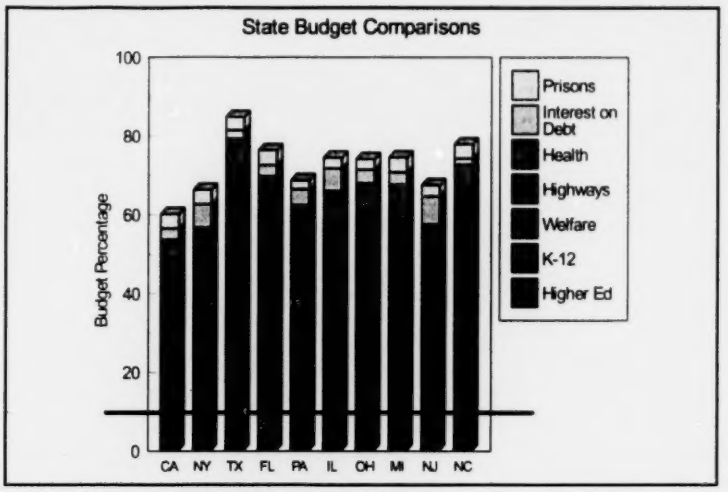
How has California Higher Education Been Funded Historically?

In order to build a world-renowned system of higher education, California established colleges and universities as a state budget priority in the 1960s. The result was acclaimed excellence. In the late 1980s, numerous countries such as Germany, Great Britain, Japan, and People's Republic of China conducted on-site visits to study California's segmental postsecondary system with the object of adapting aspects to improve their systems.[1]



Source: Advisory Commission on Intergovernmental Relations

In terms of scale, California's system is of grand design:

> There are three groupings of mega-states (in terms of funding). California is in a category of its own simply because of the magnitude of its higher education system. In the initial appropriation in FY91, prior to a revision downward, California's appropriation was over $6 billion. In the next category are Texas and New York, each with a higher education appropriation of around $3 billion. The third group has slightly less than $2 billion each. Illinois heads this group with almost $2 billion, followed by North Carolina and Florida at $1.6 billion. Next are Michigan, Pennsylvania and Ohio at $1.5 billion, New Jersey at $1.2 billion and Georgia and Minnesota at just over $1 billion.[2]

In terms of enrollments, California's public higher education system is also grand. It is four times as large as the Florida system, three times as large as the New York system, and twice as large as the Texas system.[3] In fact, you would need to combine the total system enrollments in Arizona, Colorado, Georgia, Illinois, Utah and Pennsylvania to have the equivalent of the California system.[4] On a per capita basis in terms of system size, the picture changes only somewhat. California ranks 9th among states with 41 full-time students per 1,000 state residents.[5] And considering full-time employees,

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[1] Meeting the Challenge: Preparing for Long-term Changes in California Higher Education, (Sacramento: California Postsecondary Education Commission, August 1992,) p. 10.

[2] Edward Hines, State Higher Education Appropriations, 1993-94 (Denver: State Higher Education Executive Officers Association, February 1994,) p. 5.

[3] State Profiles: Financing Public Higher Education, 1978 to 1993, (Washington, D.C.: Research Associates of Washington, November 1993,) pp. 206-218. California's 1992-93 public FTE enrollment was 1,265,763; Florida's enrollment was 354,032; New York's enrollment was 437,436; and the enrollment in Texas was 630,209.

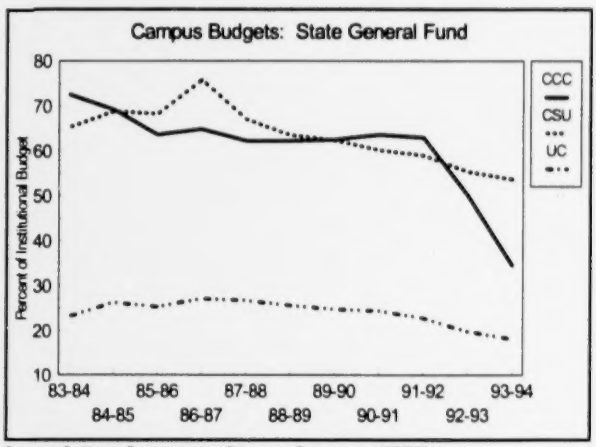
[4] Ibid.

[5] State Profiles, p. 59. "North Dakota and Wyoming operate the 'biggest little' systems in the country with more than 47 FTE public students per 1,000 population." (p. 18.) New Mexico, Kansas, Alabama, Arizona, and Nebraska all have more than 43 students per 1,000 residents.

California's public colleges and universities constitute about 10 percent of all the state campus employees nationwide: 106,617 out of a total 1,285,659.[6]

From its inception in the 1950s and 1960s, California's system of higher education was designed to be the biggest and the best. Since that time, however, the state's commitment and renown have slipped. What are the reasons? They are complex, to be certain, encompassing a range of economic and budgetary circumstances. This report seeks to present an extensive examination of related literature and issues. In general, a combination of three factors have been identified as primary contributors to the slip in the state's commitment. First, the slow erosion caused by Proposition 13. Second, the slow revenue growth due to recessions. Lastly, the skyrocketing caseload growth in other competing programs.

While explanations abound concerning the specific reasons, there is no doubt that the decline in state support is real.[7] In 1967-68, higher education comprised nearly 17 percent of State General Fund spending. By 1993-94 that share had declined to 12.1 percent.[8] Had spending remained at the former level, California would be spending about $2 billion more on higher education than it currently does--or about $1,600 more in state funding for each of the 1,267,171 FTES students enrolled in the three public higher education segments in 1993-94.[9] At this rate of subsidy for the systems as a whole, the current number of



Source: California Postsecondary Education Commission [CPEC]

[6] The Book of the States, 1994-95 Edition [Volume 30] (Lexington, Kentucky: The Council of State Governments, 1994,) p. 446. These figures represent an employee count as of October 1992. Nationally, there are four times as many public higher education employees as there are corrections employees, and these campus employees represent about one-third of all state employees in the fifty states.

[7] See "The Golden State At Risk: A Joint Statement on the Crisis Facing California Higher Education Prepared by the Higher Education Members of the Education Roundtable," (Sacramento: California Postsecondary Education Commission, February 1993.) For national perspective, see Scott Jaschik, "1% Decline in State Support for Colleges Thought To Be First 2-Year Drop Ever," The Chronicle of Higher Education, October 21, 1992.

[8] Fiscal Profiles, 1993 (Sacramento: California Postsecondary Education Commission, July 1993,) p. DISPLAY 2. Also, see Noah Baum and Brooke Bedrick, "Trading Books for Bars: The Lopsided Funding Battle Between Prisons and Universities," (San Francisco: Center on Juvenile and Criminal Justice, April 1994.) "This year, for the first time, California will spend as much on its corrections system as on its universities (UC and CSU combined.) Just over 10 years ago, the state spent more than two and one-half times as much on its universities as on corrections. During that same time span, the state constructed 19 prisons, but only one State University and no U.C. campuses." (p. 1.) "For the cost of incarcerating one prisoner for one year we can educate 10 community college students, five CSU students, or two UC students. Thus, the decision to impose a 40-year sentence on a third-strike burglar is the decision to forego 200 two-year community college educations." (p. 8.) Also, see "Voters Worry State is Robbing Education to Pay for Prisons," San Francisco Chronicle, April 15, 1994, p. A5. For a competing view, see Philip Romero, "How Incarcerating More Felons Will Benefit California's Economy," (Sacramento: Governor's Office of Planning and Research, March 31, 1994,) pp. 1-6 (plus charts.) Interestingly, Steve Gold makes two observations on national trends about corrections spending in other states: 1) prison spending in the 1990s is less than the 1980s levels, and 2) while corrections spending has been on the increase, it still constitutes a relatively small portion of most state budgets--usually accounting for 5 percent or less of general fund spending. "It is clear, however, that a significant deceleration occurred (as a national trend in the 1990s among the states) from the 12-15 percent increases throughout most of the 1980s, a decade in which state corrections spending actually quadrupled. Three factors underlying the slowdown are probably the reluctance of states to open new prisons because of substantial operating costs involved, cuts in services for inmates such as education, and smaller increases in salaries of prison employees." See Steve Gold, "State Responses to the Fiscal Crisis of the Early 1990s," (Albany, New York: Center for the Study of the States, June 2, 1993,) p. 15.

[9] Perspectives and Issues, p. 72. Fiscal Profiles, p. DISPLAY 41.

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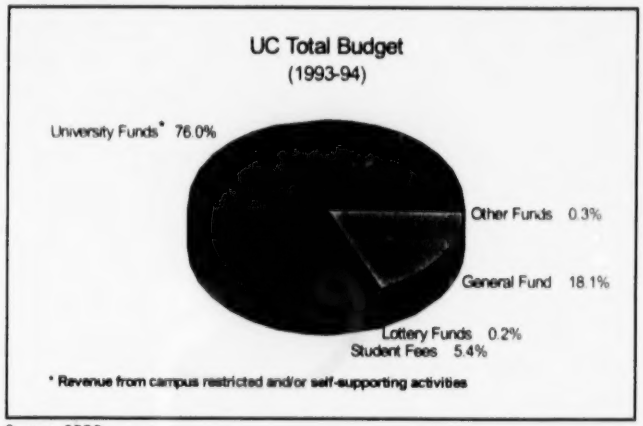
full-time students in either the UC or CSU systems could be doubled, or the community college full-time enrollment tripled.[10] Higher education hasn't been the only loser among programs competing for funding in the state budget. During the period in question, 1967-68 to 1993-94, K-12 funding declined as well: from 41.5 percent to 36 percent.

How did this decline affect the funding of the individual systems of higher education? UC's State General Fund support was nearly cut in half: from 32 percent of its budget in 1969-70 to 18.1 percent in 1993-94.[11] For CSU, State General Fund funding dropped from 69.2 percent in 1969-70 to 53.7 percent of its 1993-94 spending plan.[12] Disinvestment of Community Colleges took a different turn. Prior to Proposition 13 in 1978 (which reduced by about 54 percent the property tax funds available to local governments to fund services),[13] two-thirds of community college funding came from property tax revenue and the remaining third from state funds. This initiative immediately reversed that relationship. In 1977-78, community colleges received 39.6 percent of their funding from the state and 60.3 percent from local revenue; in 1978-79, the funding mix was 69.2 percent from the state and 28.9 percent from local sources.[14] Since that time (with the single year aberration of 1979-80 when state support increased to 80.6 percent), community colleges have experienced the same steady drop as UC and CSU in state funding as a percentage of their overall budget, from a high of 80.6 percent to 34.5 percent in 1993-94.[15] (This despite the alleged protection of



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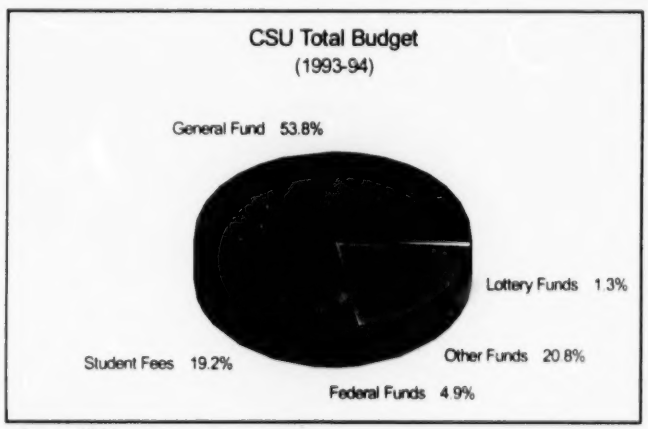

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[10] CAL Facts, p. 35. Fiscal Profiles, p. DISPLAY 41. There is some disagreement as to the average State General Fund cost per student in the three segments. This report uses LAO figures. LAO cites those (1993-94 and not instruction-specific for UC) costs as: 1) UC- $11,816; 2) CSU- $6,014; and 3) community colleges- $1,054. CPEC cites those (1991-92 and related only to instruction) costs as: 1) UC- $8,911; CSU- $6,037; and 3) community colleges- $2,989 (which includes $844 in local property tax revenue per student.) See Expenditures for University Instruction, (Sacramento: California Postsecondary Education Commission, February, 1993,) pp. 1-19. For another source, see "Discussion Paper #1: Mission and Function," (Sacramento: Assembly Committee on Higher Education, 1993,) p. 4.

[11] Fiscal Profiles, p. DISPLAY 12.

[12] Fiscal Profiles, p. DISPLAY 15.

[13] Perspectives and Issues, p. 140.

[14] Fiscal Profiles, p. DISPLAY 17.

[15] Fiscal Profiles, p. DISPLAY 17.

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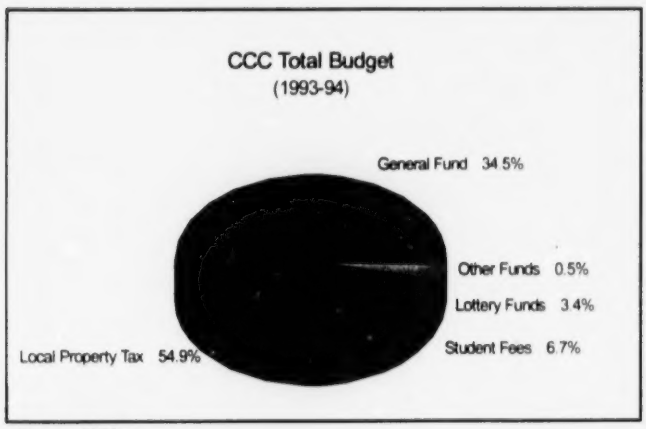
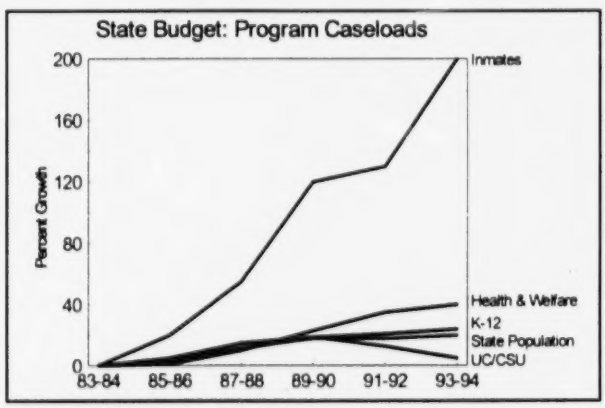
Proposition 98--which guarantees under the greater of three scenarios or tests a K-14 State General Fund minimum support level).[16]



Source CPEC

While higher education's share of the state budget declined, other programs made gains. For example, health and welfare spending jumped from 27.8 percent of the General Fund to 34.5 percent, and youth and adult corrections more than doubled its share from 3.9 percent to 8.6 percent.[17] More significantly, from 1983-84 to 1993-94, spending growth in programs like Medi-Cal, AFDC and SSI/SSP (supplemental cash assistance to the aged, blind, and disabled) was nearly 35 percent greater than that for higher education.[18]



Source Legislative Analyst's Office [LAO]

Increased funding for these programs can be attributed in large part to the fact that budget priorities tended to track caseload growth. This caseload growth has been most dramatic in corrections, and health and welfare programs. In 1983-84, California had approximately 42,000 inmates in youth and adult correctional facilities; in 1993-94, that number had increased to 126,000,[19] --which represents a 200 percent increase over the decade or 20 percent average per year. Medi-Cal grew from 2,800,000 recipients to 5,374,000, an increase of 91 percent over the 10-year period--or a year-to-year average caseload increase of 9.1 percent.[20] Aid to Families with Dependent Children (AFDC) increased from 1,606,000 participants in 1983-84 to a 1993-94 caseload of 2,597,000.[21] This growth signifies a 10-year workload increase of 61.7 percent, or a 6.2 percent yearly average. Finally, caseload for the State Supplemental Program for the Aged, Blind and Disabled (SSI/SSP), went from 652,000 at the start of the decade to 991,000--a 10-year increase of 51.9 percent, or a year-to-year average of 5.2 percent.[22]

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[16] Perspectives and Issues, pp. 90-91.

[17] Fiscal Profiles, p. DISPLAY 2.

[18] Perspectives and Issues, pp. 78-79.

[19] CAL Facts, p. 34.

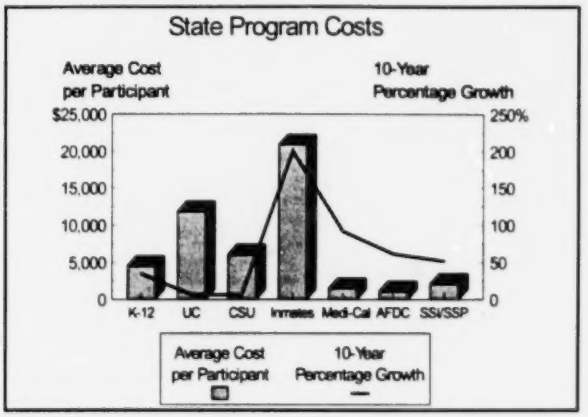
[20] Ibid.

[21] Ibid.

[22] Ibid.

These caseload growths are greater than those experienced by higher education during the last decade, when FTES enrollment at UC and CSU increased from 373,000 in 1983-84 to 398,000 in 1993-94--representing a 10-year workload increase of 6.7 percent or an average yearly increase of about three-quarters of one percent.[23] If community colleges are added, total FTES climbs from 1,127,000 to 1,267,000 over the decade.[24] This caseload jump is 12.4 percent for the 10-year period, or a 1.2 percent average increase year-to-year. Enrollment growth in independent postsecondary institutions slightly exceeded UC and CSU. Undergraduate FTE increased from 84,742 in 1983-84 to 91,106 in 1993-94, or a 10-year workload increase of 7.5 percent.[25] (It is important to note here that higher education can be restrained, unlike caseloads for corrections or welfare, by budget reductions and fee increases--a point of contention that will be taken up at greater length later in this chapter.)

As indicated above, spending priorities of the last decade tended to track to relative workload increases. These expenditure patterns, however, were not solely the result of caseload growth. Recession and budget restructuring resulting from Proposition 13 also affected the flow of funding. Severe state revenue shortfalls from the recession of 1990-94 caused a total revenue loss of about $39.5 billion (FY 1990-91--$14 billion, 1991-92--$11 billion, 1992-93--$9.5 billion, and 1993-94 and 1994-95--$5 billion). This loss resulted in the largest state government budget reductions in history. In fact, California nearly had more projected revenue loss during the 1990-94 recession than the states of New York and Florida spent from their General Funds during the entire 1993-94 budget year.[26] The cuts certain programs suffered were magnified because of the structural constraints under which California currently operates. Constitutional mandates and statutory cost-of-living adjustments for various programs have curtailed state budget flexibility, locking up 85-90 percent of the budget. Thus, in times of recession and revenue shortfall, the budget is usually balanced by spending cuts on the remaining 10-15 percent of the budget--which is discretionary. It is from this discretionary 10-15 percent of the budget that higher education funding comes. "Unlike General Fund programs for which caseload is determined by entitlement (AFDC and Medi-Cal), by demography (K-12 students), or by other governmental entities (corrections), enrollment in the CSU and the UC can be directly controlled by state policy."[27]



Source LAO

There are two reasons why higher education is not likely to regain ground under the current budgetary circumstances. First, the number of caseloads in corrections--as well as those for health and welfare--is likely to continue outpacing those for higher education. In other words, despite the fact that postsecondary education will see at least a 40 percent increase in its enrollments over the next decade or so, other programs will continue to grow at an even greater rate.

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[23] Ibid.

[24] Fiscal Profiles, p. DISPLAY 41.

[25] Association of Independent California Colleges and Universities, Faxed Chart--Enrollment Data, June 8,1994.

[26] The General Fund budget of New York in 1993-94 was $32.6 billion and for Florida it was $13.2 billion.

[27] Quarterly General Fund Forecast, (Sacramento: Commission on State Finance, January 1993,) p. 37.

Additionally, even if California's state revenues return to pre-recessionary levels, an on-going structural imbalance between revenues and expenditures will continue the multi-billion dollar shortfalls of the last several years.[28] COSF predicted in its last long-range projection that revenue will grow 7 percent per year on average under the current taxing structure.[29] Conversely, COSF also projected annual expenditure growth on average of 7.3 percent, creating up to $6 billion in revenue shortfall per year as the 21st century dawns.[30] LAO concurs that structurally the budget is out of balance, separate from normal revenue growth and the pressures of the current recession. If these projections hold, the likely course to balance the budget will continue to be cuts and, because as mentioned previously, higher education falls into the discretionary 10-15 percent of the budget, it will continue to be a "budget balancer."

California Compared to Other States

How have all of these recent economic events affected California's stand nationally as the leader in public higher education?

Sorting through comparative state revenue and expenditure data is difficult because the data are poorly collected and there is such a state-to-state variance in budgeting policy.[31] In general, states have had differing economic experiences.[32] State systems of postsecondary education have

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[28] This view was first advanced by COSF and LAO. It is one that is supported by a recent report by a Washington think tank studying issues with an impact on low-income Americans, the Center on Budget and Policy Priorities. See A Tale of Two Futures: Restructuring California's Finances to Boost Economic Growth, (Washington, D.C.: Center on Budget and Policy Priorities, April 1994,) pp. 69-96. Also, see Ronald Snell, ed., Financing State Government in the 1990s, (Washington, D.C.: National Conference of State Legislatures and National Governors' Association, 1993,) pp. 4-67. This report ascribes this structural problem in the mismatch between a tax structure built to raise revenue on the economy of the 1970s and a society facing the 21st century economically and demographically very different from 1970. Conversely, however, a recent report by the California Business-Higher Education Forum concludes that a dramatic drop in net migration to California will negate in the next decade the same tremendous caseload growths which have caused problems over the last decade. See California Fiscal Reform: A Plan for Action (Task Force Reports), (Oakland, California: California Business-Higher Education Forum, May 1994,) pp. 13-24. Also, see David Bowman, et al., "Structural Deficit," pp. 25-50. "When the current recession ends, the state's General Fund is likely to be in structural deficit. Although the state will return to its long-term growth rate, it will have permanently lost some share of the nation's income and employment." (p. 46.)

[29] 1991 Annual Long-Term General Fund Forecast (Sacramento: Commission on State Finance, Fall 1991,) pp. 19-55. Also see California Budget Outlook, p. 20.

[30] 1991 Annual Long-Term Forecast, p. E-5. In Meeting the Challenge, CPEC cited revenue growth as 6.9 percent and expenditure growth as 7.5 percent (although curiously enough their source for these numbers is the 1991 COSF report), all resulting in annual deficits up to $7 billion by 2001 (p. 8.) In California's Growing Taxpayer Squeeze, DOF predicted "this imbalance between taxpayers and tax receivers (e.g., 'students, welfare recipients, prisoners and Medi-Cal eligibles) could result in a $20 billion budget gap in the year 2000 (p. 1.)" It should be noted, however that all of these long-term forecasts were made at the height of the 1990-94 recession.

[31] Even when states are asked to report data according to a prescribed format--such as the conventional fiscal reporting guidelines as defined in the Higher Education Finance Manual for voluntary reporting on the federal survey called IPEDS (Integrated Postsecondary Education Data System Finance Survey)--states tend to report information in the manner that it is collected, which is far from uniform and defeats the stated purpose of the survey. See Charles Lenth, The Tuition Dilemma-State Policies and Practices in Pricing Public Higher Education (Denver: State Higher Education Executive Officers Association, December 1993,) p. 14. "These definitional issues have remained complex and unresolved in many states. For example, an effort by the California Postsecondary Education Commission to address a seemingly simple legislative request to identify expenditures for university instructional purposes led to a multi-month, inter-segment effort that resulted in four measures of instructional expenditures, each with some statistical validity and inherent meaning, different policy or financial uses, and strong institutional defenders." [The report referenced here is Expenditures for University Instruction by CPEC staff.]

[32] Gold, "State Responses to the Fiscal Crisis of the Early 1990s," pp. 23-24. "The 1990s were certainly worse than the 1980s in some states, those where the recession struck with much greater severity. These states include those in New England as well as California, New Jersey and New York. But the 1990-91 recession was not as severe in the Midwest, and

developed differently and, as a result, their approach to funding differs. For instance, "Like the other western states, California built its higher education delivery system with an emphasis on providing low-cost access to public institutions, particularly community colleges. Postsecondary education in most New England and Atlantic states evolved differently, with a large proportion of college students educated at private institutions with substantial assistance (e.g., largely in financial aid to the student) from state government."[33]

Differences also exist among states in their tax capacities and levels of utilization of those capacities. States operate in different cost climates (geographical differences in government purchasing power), and they place differing budget priorities on programs. For example, higher education comprises twice the percentage of the state General Fund in Colorado and Utah (two states with academically-solid systems of higher education and coincidentally, growing economies) than it does in California, and nearly twice the California commitment in the state of Texas.[34] But even these comparisons are deceiving, as they do not take into account state-to-state differences in tax capacity, tax effort and the relative size of the caseload. States with low tax potential may attempt to enhance their effort to fund higher education, or any other state program, with higher than average tax rates. Prosperous states, on the other hand, can achieve the same revenue yield with lower rates. "Rich states with few students, such as Connecticut, Hawaii, New Hampshire, and New Jersey, can provide high or at least average funding with only modest effort. There is also a large group of states (California, Illinois, Louisiana, Texas, Georgia, Virginia, Kentucky, Maryland, Tennessee, and Colorado) with average funding potential yet seriously underfunded systems. At the opposite extreme are the relatively poor states with comparatively large systems, such as North Dakota and New Mexico, who must and do exert great fiscal effort to achieve excellent system funding."[35]

All of these caveats being duly established, several major reports have nevertheless ventured to draw significant comparisons about higher education funding between states.

In budget numbers collected by Edward Hines of Illinois State University[36], California ranked 39th among the states in per capita higher education appropriations, and 41st in higher education appropriations per $1,000 of income.[37] According to Hines, California spends $142.04 per state

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the states in that region were not as fiscally stressed as they were in the early 1980s."

[33] "Discussion Paper #5: Student Charges and Aid," Master Plan for Higher Education in Focus, (Sacramento: Assembly Committee on Higher Education, 1993,) p. 1.

[34] Significant Features of Fiscal Federalism, 1993 [Volume 2- Revenues and Expenditures,] (Washington, D.C.: Advisory Commission on Intergovernmental Relations, September 1993,) pp. 142-143. Here we begin to run into the problems of comparability and timeliness of data. ACIR, which is well-respected for its work, indicates that California's share of "state general expenditures" devoted to higher education for FY 1991 was 9.6 percent. ACIR places Florida at 8.6 percent, New York at 6.9 percent, Texas at 16 percent, Colorado at 21.3 percent and Utah at 21.8 percent of state general expenditures. The California figure doesn't correlate to the number in Fiscal Profiles, reported above and drawn by CPEC from reconciliation of the Governor's Budget to actual expenditures. Also, the ACIR data are several years old (a factor of some importance given the 1990-94 recession), although the dated nature of the data doesn't change the importance of the trend. The data then is relevant if it is used within the same data set. So, what is drawn from the ACIR figures is that Texas, Colorado and Utah devote a higher percentage of their general fund dollars to higher education than California, Florida and New York.

[35] State Profiles, p. 39.

[36] Hines' report has been picked up and "sponsored" by the State Higher Education Executive Officers Association. This report originated as the Chambers or Grapevine report.

[37] Edward Hines, State Higher Education Appropriations, 1993-94 (Denver: State Higher Education Executive Officers Association, February 1994,) p. 13. Figures are based on appropriations for operating expenses and do not include capital outlay. Also, any analysis using these numbers needs to take into account the circumstances alluded to above. For example, these numbers would not show the full extent of community college funding, as local property tax revenue usually figures prominently in most community college budgets. Also, states with academically-prestigious and/or large enrollment independent colleges tend to have less need (and therefore spend less) for public institutions. Also, to control for distortions in state-to-state comparisons, per capita revenues are used but perhaps a better measure is state spending per $1,000 of

resident on colleges and universities, and $6.57 of every $1,000 of income received.[38] This level of commitment places California under the national average of $160.22 per capita, or $7.96 of every $1,000 of income.[39]

Hines found that during the past decade, California's spending on higher education also fell below the national average. States, on average, have increased their higher education spending by 58 percent, while California's spending has increased by 36 percent.[40] In conclusion, Hines reported that California was one of the eight worst states in terms of higher education appropriations during FY 1993-94, based on capacity, willingness to appropriate funds, and effort.[41]

Another interstate comparison report on higher education funding, published by the Washington State Higher Education Coordinating Board, found that in 1976-77 (prior to the passage of Proposition 13), California rated 20th among the states in combined state and local appropriations for higher education per FTE student.[42] In that year, California averaged an expenditure of $2,396, which was less than the national average of $2,431.[43] This measurement, however, reflects a very high community college participation rate rather than a low budget priority for higher education. Because community colleges offer the lowest cost delivery system, high enrollment would pull down the average expenditure when compared to states with a small community college system but a large 4-year segment.

This fact is best illustrated by the next two measures, both of which confirm strong relative standing. When state and local spending on higher education were compared on a per capita basis, California ranked third among the states with a per resident spending of $109.81--well above the national average of $71.04.[44] When states were ranked according to state and local spending on higher education per $1,000 of personal income, California rated 6th at $16.66--again well above the national average of $11.40.[45]

The latest issue of the Washington report covers FY 1990-91, and was issued in March 1993 (which again demonstrates the difficult lag time involved in collecting data nationally). From the relative decline within the California State General Fund budget of higher education vis-a-vis other programs, one would expect that California's ranking would have fallen over this 15-year period (notwithstanding the fact that the 1990-91 report does not contain the spending ramifications of the severe recession of 1990-94.)

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resident income. "Although per capita revenues are increasing, the burden of raising those revenues might not be rising if growth of the state's economy led to real increases in incomes. To determine whether this is the case, economists frequently rely on measures of revenues or expenditures per unit of personal income." (California Fiscal Reform, p. 64.)

[38] Ibid.

[39] Ibid.

[40] Ibid., p. 12.

[41] Ibid., p. 8. The top nine were Connecticut, Texas, Georgia, New Hampshire, Alabama, Florida, New Mexico, Ohio, and South Dakota. The bottom eight were North Dakota, Louisiana, Oklahoma, South Carolina, Montana, Nevada, California and Oregon.

[42] Financial Support of Higher Education: 1976-77 (Olympia, Washington: Washington State Higher Education Coordinating Board, August 1977.) p. 5.

[43] Ibid. This measure concentrates on total state and local tax support per student as opposed to a measure of educational cost per student.

[44] Ibid., p. 7.

[45] Ibid., p. 15.

Surprisingly, however, California's relative rank on state and local spending on higher education per FTE student improved in 1990-91 to 8th. At $6,753 per student, this level of spending was significantly above the national average of $5,728.[46] How can this be explained? Well, during this 15-year period, higher education's share of the California General Fund declined from 17.5 percent (a significant jump over the 1975-76 level of 16.8) to 14.6 percent in 1990-91. Meanwhile, other states were also struggling with growing Medicaid caseloads and recessions without much in terms of new taxes. It is possible that California's relative position improved despite similar circumstances because of the sheer size of its budget in ever-growing current-year dollars.

Measures based on per capita and income spending on higher education conformed more to the expectation that California's relative rank among the states would decline, as both measures control better for size distortions. In terms of state and local spending per capita, this measure fell. California ranked 10th at $213.34 per state resident (which was still above the national average of $172.96).[47] For state and local spending on postsecondary education per $1,000 of personal income, California fell to 22nd.[48] Notwithstanding this significant decline, California's level of $10.32 per $1,000 of income was still above the national average of $9.26.[49] Maybe the most revealing aspect of these figures, however, is that they demonstrate--when contrasted with the Hines data--how devastating the 1990-94 recession was to California higher education. These numbers do seem to corroborate a contention by the California Business-Higher Education Forum that prior to Proposition 13, California was a high tax-high (government) service state, while today it is medium tax-medium service.[50]

The California Taxpayers Association (Cal-Tax), using pre-recession data from fiscal year 1990-91 and analyzing that data from a per capita basis, ranked California 23rd among the states in higher education funding.[51] Yet, because per capita measures distort,[52] Cal-Tax used a per worker measure of the relative burden of government spending. On this basis, Cal-Tax placed California 7th in total

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[46] Financial Support of Higher Education: 1990-91 (Olympia, Washington: Washington State Higher Education Coordinating Board, March 1993,) p. 9.

[47] Ibid., p. 11.

[48] Ibid., p. 12.

[49] Ibid.

[50] California Fiscal Reform (Task Force Reports), pp. 63-80. Conversely, the California Taxpayers' Association maintains that, while the tax burden is lower than it was prior to Proposition 13, the growth of fees, benefit assessments, fines, rents and other special impositions has "virtually erased the effects of Proposition 13's tax reductions." In a research brief, Cal-Tax argues that, prior to Prop 13, this tax burden was 14-16 percent of personal income and that this level declined after 1978 to about 11 percent. But, according to Cal-Tax, fees have returned that overall percentage of income going to government back to the 16 percent level. Put another way, taxes have fallen from 82 percent of government revenues to 69 percent, but fees and assessment have made-up that differential. As a result, Cal-Tax contends that current funding difficulties are the result of a spending problem, not a revenue problem. "Tax levels are mostly determined by spending decisions, because governments typically create their budgets by determining spending needs and then adjusting revenues to meet those needs." ("California Taxing and Spending: A New Look at Tax Burdens," Cal-Tax Research Bulletin, May 1993, p. 4.) Also, see "California State and Local Revenue Growth: Effects of Proposition 13 are Almost Gone," Cal-Tax Research Brief, contained in Cal-Tax News, April 1, 1994.

[51] See Cal-Tax Research Bulletin, May 1993, p. 3. Interestingly, Cal-Tax ranks California 4th among states in spending on corrections, and this ranking was done before the 1990-94 recession.

[52] Cal-Tax maintains that per capita figures are not an accurate yardstick of tax burden or effort because they are predicated on numbers reflecting the entire state resident population. These numbers would then include both working and non-working residents (Cal-Tax cites figures which rank California 33rd among states in terms of their labor force as a percent of the overall state population), although--according to Cal-Tax--only the workers pay taxes. Cal-Tax does acknowledge that this per worker measure is flawed as well: California has a significant nonworking population independently wealthy or with sufficient income or assets to be taxed. This is demonstrated when Cal-Tax ranks states by taxes per $1,000 of income: California is 22nd. See Cal-Tax Research Bulletin, May 1993, pp. 4-10.

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state and local revenue per worker at $4,675--compared to the national average of $4,182.[53] When Cal-Tax included fees and assessments in this per worker measure, California climbed to 5th nationally at $5,931--compared to the national average of $5,201.[54] When, however, this tax and fee/assessment burden was calculated per $1,000 of resident income, California ranked 25th among states, which is in line with the medium tax label.

Perhaps the best comparative data on relative state support for higher education comes from a private source, Research Associates of Washington, D.C. (RAW). The report begins by establishing the relative capacity of states to fund higher education. According to RAW, Mississippi is the nation's poorest state and has half the taxing potential of the richest (Wyoming) to pay for public programs. This illustrates the tremendous range in state and local government resource.[55] "The poor states usually attempt to 'catch-up' with higher than average tax rates, while the prosperous can adequately fund their public services with modest rates."[56] This factor, as stated, can have significant repercussions in public policy and finance. For example, the low tax capacity of Mississippi means its university and colleges are funded at about 70 percent of the level resulting from a similar tax effort in Alaska, Hawaii, Delaware or Nevada. The potential of California to raise revenue, according to RAW, ranks the state 20th with an adjusted per capita rate of $2,295, placing it above the national average of $2,160.[57]

Tax effort measures how much of the tax capacity a state actually uses. "There is less range here than exhibited by tax capacity, but [for example] New York's effort is still about twice that of Wyoming and Nevada. Tax effort is governed in part by the need for public services, but also strongly reflects the philosophy of citizens regarding the role of government and payment responsibility."[58] California ranks 26th in tax effort, demonstrating less than the national average in willingness to raise revenue for public services.[59] Furthermore, according to the relative budget priority it places on higher

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[53] Ibid., p. 8.

[54] Ibid., p. 10.

[55] State Profiles, p. 19. RAW controls for geographical cost variations through what it calls the "cost of government." "Tax capacity adjusted by the Cost of Government (COG) index establishes equivalency of purchasing power by accounting for geographical differences in prices." (p. 49) RAW further refines its data for comparability by applying two other adjustments: a system support index and the higher education price index. The former controls for differences among states because some systems are slanted more toward inherently less costly lower division undergraduate programs, primarily through large community college systems as opposed to systems with a large university component. The latter controls for price inflation to establish year-to-year equivalent purchasing power and develops the relative average price campuses pay for goods and services to operate the institution, exclusive of research and financial aid. (pp. 22-24) These refinements, coupled with the fact that RAW has been collecting these data over time, make it the best source of comparative cost figures.

[56] Ibid. "State gaining the most potential economic wealth [in constant HEPI (Higher Education Price Index) adjusted dollars] in the last 15 years are Hawaii, Massachusetts, Connecticut, Maine, and Vermont. The least gains occurred in West Virginia, Oklahoma, Nevada, Texas, and Wyoming. In the case of West Virginia and Texas, "the poor get poorer." (p. 21.)

[57] Ibid., p. 60. Wyoming, as mentioned, has the greatest capacity at $3,812 per capita and Mississippi has the least at $1,814. Rates for other major industrial states: Florida--$2,206; New York--$1,919; and Texas--$$2,140.

[58] Ibid., p. 19. "States which traditionally impose high tax rates on their economic activity and/or residents are New York, Wisconsin, Alaska (via severance taxes), Rhode Island, New Jersey, and Minnesota, each having an average collective rate 10 percent above the national average. The average tax rate in New York state is a whopping 56 percent above the national mean. Low tax states include Nevada, Wyoming, Delaware, Tennessee, and Arkansas, with rates about 80 percent of the U.S. average. Some states with high tax capacity are, of course, able to impose low rates and still collect a reasonable level of revenues. Inherently poor states, however, must impose high taxes to garner even average revenues...States with the greatest tax rate increases include Texas, West Virginia, Oklahoma, New Mexico, and Ohio. Collection effort in Massachusetts, Hawaii, California, Alaska, and Colorado has actually declined since 1977. This means that collected tax revenues relative to potential capacity for these states is less now than 15 years ago." (p. 21.)

[59] Ibid., p. 61.

education, California ranked 41st among states. (This ratio considers a state's effort to fund higher education out of tax wealth proportional to need.)[60]

RAW confirms the other data regarding the 15-year decline in state higher education support, noting a 15.3 percent decrease over that time frame for California, when the national average increased by 17.1 percent.[61] In sum, with regard to state support the data appear to confirm that:

- California's level of higher education appropriations to that of her sister states slipped markedly in the last 15 years; and
- California's level of higher education appropriations is low compared to the state's capacity to fund such programs.

It deserves noting that these trends are not, however, unique to California. Higher education has been losing its relative state budget share in other states through the similar counter-pressures of static revenue (usually as a result of recession and anti-tax sentiment) and escalating caseloads in other competing programs.[62]

Steve Gold has been studying five different state budgets, chosen to provide a representative sample of the spectrum of state spending approaches. In four of five of those states, higher education spending declined significantly over a seven-year period, despite strong caseload growth in four of the states. Those changes, which took place from 1985 to 1992, occurred in:

- California--where State General Fund share for higher education declined from 15.9 to 13.1 percent while caseload increased 14.3 percent;
- Colorado--where State General Fund share for higher education declined from 21.7 to 18.0 percent while caseload increased 18.2 percent;
- Florida--where State General Fund share for higher education declined from 16 to 13 percent while caseload increased 61.5 percent; and
- Connecticut, where State General Fund share for higher education declined from 8.0 to 6.5 percent while caseload grew 3.4 percent.

Only in Minnesota did the State General Fund share for higher education increase, from 14.8 to 18.6 percent, while caseload increased 15.8 percent.[63]

Ultimately, the program areas that have gained the most in the budgets of other states are the same as in California: Medicaid and corrections. For the 50 states over the 1985 to 1992 time span, Medicaid on average increased its state budget share from 8.7 to 12.0 percent and corrections rose

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[60] Ibid., p. 64.

[61] Ibid., p. 65.

[62] "State Responses to the Fiscal Crisis of the Early 1990s," p. 14.

[63] Steve Gold and Jill Schmelz, "Health Spending and State Budgets," (Albany, New York: Center for the Study of the States, May 17, 1994,) p. 148-150. Please note that Gold's numbers on State General Fund share are not compatible with numbers collected by the Advisory Commission on Intergovernmental Relations (ACIR.) This variation is undoubtedly a result of what Gold defines as "State General Fund" and what ACIR classifies as "State General Expenditures." The important aspect of this analysis is the trend within a comparable data set. As for the aberration in the above trend, Minnesota is a state that has always demonstrated an above average commitment to fund public programs and has also placed a priority in particular on higher education. See State Profiles, p. 61, 63. Minnesota is 7th among states in tax effort and 19th in tax revenues per FTE student.

from 3.6 to 5.7 percent, while higher education declined from an average 14 percent share in 1985 to 13.5 percent in 1992.[64]

As the evidence shows, the slow but steady decline in state and local support for higher education is a national phenomenon, not just confined to California.[65] This decreased funding did not take place because states had less resources but rather because higher education lost ground in terms of priority assigned to its funding from state sources. "Tax wealth to fund public higher education [in dollars of constant education purchasing power per FTE public student] has increased 11.1 percent since 1978. Yet the appropriated support of public higher education has drastically declined, 12.6 percent in the same time period."[66] This has been paralleled by a decline in the federal effort to finance higher education. In 1960, .22 percent of federal spending went to higher education. This figure rose to a peak of .95 percent in 1981, and has since dropped off to .70 percent in 1992.[67]

Higher Education as an Investment

Opinion on how to confront this decline in higher education state funding has divided into two primary camps. On one side are those who believe California is eating its seed corn by neglecting public infrastructure investment. Countering that argument are those who believe California's citizens were being taxed into ruin prior to Proposition 13. These critics oppose higher government spending.[68] The California Business-Higher Education Forum, the Business Roundtable and the Center for Budget and Policy Priorities represent the first school of thought. They argue that "California's capital expenditures have been 20 percent below the national average over the last two decades. This is in sharp contrast to the Golden State's pattern in the 1950s and 1960s, when its capital expenditures exceeded the national average by 20 to 40 percent."[69]

A report by the Forum compares today's California with Michigan in the 1980s. Michigan lost nearly one-quarter of its manufacturing jobs (170,400) between 1979 and 1986. These jobs were replaced by 199,400 non-manufacturing jobs, most of which paid half what the lost manufacturing jobs did. These events forced major state budget crises that were addressed with one-time or temporary measures rather than facing up to structural changes underway in the economy and the state budget.[70] To prevent California from repeating the Michigan experience, the Forum report urges the state to implement four fundamental changes to restore California's promise:

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[64] "Health Spending and State Budgets," p. 148. Medicaid share in Colorado increased from 9.2 to 14.2 percent, in Connecticut it went from 9.0 to 11.0 percent, in Florida it was 6.6 to 11.9 percent, and in Minnesota it rose from 10.1 to 12.0 percent. Corrections share of the state budget increased in Colorado from 2.9 to 7.0 percent, in Connecticut from 2.5 to 4.2 percent, and in Florida from 4.9 to 7.9 percent. In Minnesota, prison spending hardly increased: from 2.0 to 2.2 percent. In fact, higher education in Minnesota by far had the largest gain in state budget share of any government program-- from 14.8 to 18.6 percent (p. 149.)

[65] State Profiles, pp. 26-28. Also, see Mortenson, "Restructuring Higher Education Finance," p. 4. "Higher education's share of state and local government expenditures increased from 3.56 percent in 1954 to a peak of 8.15 percent in 1982, and has since dropped off to 6.58 percent in 1992. The 1992 share was 80.7 percent of the share of state and local government expenditures." When adjusting state spending to $1,000 of personal income, the picture of recent decline is uniform. "In each and every state, state tax appropriations (for higher education) per $1,000 of personal income declined between 1978-79 and 1993-94." (p. 14.)

[66] Ibid., p. 26. One could make an argument, however, that in California--unlike the rest of the nation--there have been less resources for a variety of reasons and an ever-expanding caseload growth in other programs.

[67] Mortenson, "Restructuring Higher Education Finance," p. 4.

[68] See Dan Walters, "What's Causing Budget Plight," Sacramento Bee, April 12, 1994.

[69] California Fiscal Reform (Task Force Reports), p. 63.

[70] Ibid., pp. 77-78.

- Eliminate any constitutional earmarking of State General Fund revenue for specific purposes, such as Proposition 98 and K-14 funding;

- Eliminate two-thirds voting requirement on state and local taxes;

- Revise Proposition 13, raising from 2 to 6 percent per year the rate of increase in assessed value for property assessed at less than market value, and replacing homeowner exemption with tax credit limiting property tax as a percent of household income; and,

- Extend gradually the number of services taxed under the sales and use tax.[71]

The Center on Budget and Policy Priorities makes a similar case, as does the Business Roundtable. They assert that below average infrastructure investment will produce a sub-par California economy, workforce and quality of life.[72] The Center's solution to this problem is to eliminate some tax loopholes (called tax expenditures), expand the sales tax to include certain services, and make changes in Proposition 13.[73]

The work of the Forum and the Center is founded in part on a study by a consortium of National Conference of State Legislatures and the National Governors' Association. This report faults the government program growth limit (the Gann limit in California) which is tied to the combined growth in a state's economy and population. "In order to fund such a 'steady-state' budget, revenues would have to grow at the same rate. Most state taxes [as currently configured] would not do so in the absence of rate increases."[74] To avoid such rate increases, both organizations are proposing

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[71] California Fiscal Reform (Summary and Recommendations), pp. 2-4.

[72] Tale of Two Futures, pp. ix-xiii. "The average amount California spends to educate each (K-12) student fell from 21 percent above the average in all other states in school year 1959-60 to three percent below the average in 1989-90. The recent fiscal crisis accelerated this trend, lowering per-pupil spending in California in 1992-93 to 14 percent below the average spent in other states." (p. ix.) "In 1961-62, California spent 87 percent more on higher education as a share of income than the rest of the nation. In 1977-78, spending was one-third higher than the national average. By 1989-90, California's commitment was no longer outstanding; it spent just four percent more on higher education as a share of income than the national average." (p. x.) "The value of California's roads, schools, sanitation systems, and utilities relative to its population was 40 percent greater than the average in other states and third highest in the nation...By 1988, the per capita value of California's infrastructure was 11 percent below the average of the other states and ranked 36th in the nation." (pp. x-xi.) Also, see Robert Heilbroner and Lester Thurow, Economics Explained, (New York: Touchstone, 1994,) pp. 257-258. Both economists argue that the United States has foolishly cut infrastructure spending with impending dire consequences. "They (e.g., Europe and Japan) built strong infrastructures of roads, high-speed railroads, public housing, research and development centers; we cut our infrastructure expenditures by 30 to 50 percent. They established world-leadership public-education systems; we allowed our high schools to graduate students who regularly came in last or next to last in international rankings, especially in the sciences and math."

[73] Ibid., pp. xiv-xxii. "In 1992, total California tax expenditures amounted to $19.9 billion, or nearly half of the $43.3 billion in general fund expenditures...While it takes a simple majority to institute a tax expenditure, reducing or eliminating an inefficient or ineffective tax expenditure is considered a tax increase and requires a two-thirds vote. Thus, it is far easier to begin these spending programs than to limit them." (p. xiv-xv.) "In California, the growth of sales tax revenue has lagged significantly behind the growth in personal income, which is the best indicator of total consumption in a state...If California broadened the base of its sales tax to include more services, the falling yield could be slowed and sales tax revenue would grow in concert with growth in consumption." (p. xviii-xix.) "Property tax revenues were bolstered in the 1980s by a near-doubling of the median sales price for existing homes in California, along with high rates of new residential and commercial construction. In recent years, real estate activity has dropped significantly, and a solid rebound is not expected for some time. One solution to these problems is to assess business property at full market value periodically, rather than only at times of sales, while continuing the Proposition 13 limit of one percent for the property tax rate. This is often described as establishing a "split roll" property tax because it would treat commercial and residential property differently." (p. xxii.)

[74] Ronald Snell, ed., Financing State Government in the 1990s (Washington, D.C.: National Conference of State Legislatures and National Governors' Association, 1993,) p. 7. "If structural problems prevent state tax revenues from growing in proportion to economic and population growth, the state would either have to cut spending repeatedly or raise tax rates to sustain spending in proportion to such growth."

structural changes in the sales and property tax to make those revenue sources more responsive to economic and demographic growth.

Critics of this perspective often present a condensed argument: government is incapable of efficiently allocating resources. If private consumers are permitted to retain more of their incomes, the marketplace will allocate those resources far more efficiently.[75] For every $100 million in tax increase, they believe the economic consequences cost California about 2500 jobs.[76]

The reality probably falls somewhere between these two views. An onerous tax burden will indeed impede growth but economic growth cannot be sustained without a strong infrastructure. Any tax increases must be analyzed very carefully and targeted to those infrastructure needs. Work by Jay Helms confirms this. Helms contends that a 2 percent increase in a state's overall tax burden cuts personal income growth by 1.4 percent if the revenue is channeled to government transfer payment programs such as welfare.[77] But there is no adverse effect on income, for example, if the revenue goes to educational programs improving workforce quality. A recent Wells Fargo study confirms this assessment. "California sharply outspends the competition (i.e., other states) in areas like welfare, state subsidized health care, and corrections...In areas that truly add value to the economy--education, construction and maintenance of transportation systems, and other types of capital investment--California lags the other Western states."[78]

In terms of cost benefit analysis, that $100 million may inhibit employers from hiring 2500 workers because of increased operating costs, but it would pay for the education of 100,000 community college students for a year.

In any event, voter sentiment during recent elections clearly signaled that the recession was still very much a concern and there was little interest in raising any tax or commencing any new government construction projects. This view is likely to prevail until the recovery solidifies in 1995 or 1996.

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[75] California Fiscal Reform, p. 78.

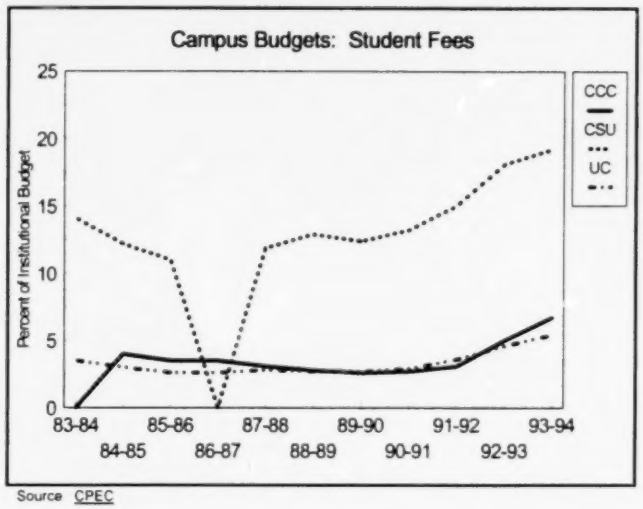
[76] Remarks of Phillip Romeo, Director of Governor's Office of Planning at Reinventing California Forum held April 22, 1994 by UC- Davis Extension. Also, see Jonathan Marshall, "The Growing Tax Threat," San Francisco Chronicle, October 4, 1993, pp. D1, D6.

[77] Jay Helms, "The Effect of State and Local Taxes on Economic Growth: A Time Series-Cross Section Approach," The Review of Economics and Statistics, Vol. LXVII, No. 4, (Boston: Harvard University Press, November, 1985.) pp. 574-575.

[78] "California," The Wells Fargo Economic Monitor (San Francisco: Wells Fargo Bank, August 31, 1993.) p. 2.

Alternative Funding Sources

What are the other sources of revenue for higher education besides state funds and what is the projection for future growth in these revenue sources?



Source CPEC

Obviously, student fees[79] represent a much-discussed revenue source in 1994 for all three segments. As an aggregate revenue, however, fees are not as a significant share of the segments' budgets as the discussion might indicate. For UC, systemwide fee revenue as a budget share has grown from 2.3 percent in 1969-70 to 5.4 percent in 1993-94.[80] For CSU, student fee revenue has escalated from 8.5 percent of its overall system budget in 1969-70 to 19.2 percent in 1993-94.[81] California's community colleges were free until 1984, but fee increases since then have propelled fee revenue to a 6.7 percent share of the overall statewide budget.[82] Fees currently charged resident undergraduates at UC and CSU are at or slightly above the average for comparable public university systems, but fees charged at California community colleges are the lowest in any state in the nation.

But these relative share increases belie the tremendous year-to-year fee increases that have taken place in California, which at one time had the lowest resident fees in the country for all three segments.[83] If fees for UC and CSU in 1994-95 rise by 10 percent[84] and community college fees remain at $13 per unit, fees at the UC will have risen 134 percent since 1990-91 (from $1,624 to $3,799), fees at CSU will have increased 103 percent (from $780 to $1,584) and the fee hike at the community colleges will be 290 percent (from $100 to $390.) These hikes occurred because of

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[79] Historically, in California, the state has undertaken the burden of supporting 100 percent of the costs associated with instruction. Over time, however, students have been charged for activities not directly related to instruction (such as campus health service or intercollegiate athletics.) The former is "tuition" and has been pretty much taboo for California residents, and the latter is referred to as "fees". These lines of demarcation have become increasingly blurred at the campus level as institutions have struggled to maintain Master Plan enrollments with fee revenue to backfill state budget cuts. In fact, CSU advanced an affordability model on fees that began referring to fees as tuition in 1993 and UC followed suit in 1994. The legislature has not approved either of these approaches.

[80] Fiscal Profiles, DISPLAY 12. The systemwide fee revenue generated by UC in 1993-94 was $529.2 million. (DISPLAY 48.)

[81] Fiscal Profiles, DISPLAY 15. The systemwide fee revenue generated by CSU in 1993-94 was $425.9 million. (DISPLAY 50)

[82] Fiscal Profiles, DISPLAY 17. The systemwide fee revenue generated by CCC in 1993-94 was $216.7 million. (DISPLAY 52)

[83] See "Discussion Paper #5," p. 1. "By the time of the 1960 Master Plan, UC students (resident undergraduates) still paid less than $250 (per year), CSU students about $100, and community colleges were free of charge."

[84] State law on resident fees, enacted in 1985, requires increases to be "gradual, moderate, predictable, and equitably borne by all students in each segment." Year-to-year increases are restricted to no more than ten percent, financial aid is to offset the entire cost of any increase for needy students and a notice to students was required ten months in advance of any such increase. Besides resident fees, however, nonresident students in all segments are charged tuition equal to, or in excess of, the actual cost of education.

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extraordinary budget pressures and were in violation of a 1985 state law requiring increases to be "gradual, moderate, equitable and predictable."

So, although a trend that has been resisted in Western states with their low tuition approach to maintaining access, fee revenue (along with revenue from sources other than government) at public college and universities has backfilled the decline over the last 15 years in state support.[85] "This trend is to shift responsibilities for paying for higher education from taxpayers at all levels of government to students and their families."[86] According to RAW, a little over a decade ago students paid about one-fifth (21 percent) of the cost of a public postsecondary education. In 1993, it was close to a third (31 percent).[87]

By RAW's computations, there is, however, great variety in the range of student share of the cost: students in Vermont, New Hampshire, Delaware, Pennsylvania, Colorado, and Rhode Island pay more than 45 percent of the cost of their college education while students in Hawaii, Idaho, Alaska, Nevada and California pay less than 17 percent.[88] In fact, Vermont students pay 10 times the share of their education as do students in California.[89]

The methodology to set tuition or fees varies greatly across the states. Some states set student charges according to changes in the Consumer Price Index, others to variations in the Higher Education Price Index, some to changes in state personal income or disposal income, some calibrate it to the cost of education or some measure of instructional costs, others index to peer group inter-institutional comparisons, while the rest settle charges in relation to the amount of state funds available.[90]

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[85] Mortenson, "Restructuring Higher Education Finance," p. 17. Mortenson calls this phenomenon the "refinancing" of higher education. "Between FY1963 and FY1981 the proportion of current operations expenditures covered by institutional charges grew modestly, from 22.7 percent of operational expenditures to 24.7 percent. However, between FY1981 and FY1992, institutional charges as a proportion of current operations expenditures increased to 35.9 percent. The annual rate of increase from FY1982 to FY1992 was nine times the average annual rate of increase between FY1963 and FY1981." Also, see Corina Eckl, "Joe College Pays the Tab," State Legislatures, September 1993, pp. 32-36. "Although precise data are unavailable, Harold A. Hovey, editor of State Policy Reports, projects that state fiscal conditions and the resulting reductions in state funding account for 57 percent of recent tuition increases." (p. 35)

[86] Mortenson, "Restructuring Higher Education Finance," p. 1. Advocates of high tuition would point out that, while fees have increased over the last 15 years, individuals nationwide (both public and private postsecondary) on average paid a larger portion of costs in the 1950s: individuals nationwide paid 51.3 percent of cost in 1952. This share declined steadily as college became increasingly necessary in the workplace, concern mounted about access and social mobility of under-represented groups, and government took on more share of the cost. The individual's share dropped to a low of 34.4 percent in 1979, but had risen to 43.9 percent by 1992. State and local government's share peaked at 57.7 percent in 1974, but has since dropped to a low of 47.2 percent.

[87] State Profiles, p. 33. Obviously, this computation could vary greatly depending upon definition.

[88] Ibid. In looking at this comparison, one must take into account the difficulty in defining terms: does, for example, "cost of college education" mean cost of instruction, cost of attendance or cost of education? Depending on the mission of the campus or the perspective of the cost computation (e.g., the student--cost of attendance or the institution--cost of education), the comparison could be drawing parallels between different measures. Also, RAW incorporates in these figures both in-state and out-of-state fees. Although most states charge out-of-state students at least the full cost of education as a fee, there are states that go beyond this and aggressively recruit out-of-state students as a significant revenue source. Colorado is in this category. For comparison purposes, in the instance of states like Colorado, this approach obviously skews the picture.

[89] Ibid., p. 67. RAW computes a factor that it refers to as "total financial support." RAW defines "total financial support" as state higher education appropriations and net tuition per FTE student. Adjusted for the cost of government and a system support index, Wyoming leads the states at $10,022 per FTE student while California ranks 51st (ranking includes the District of Columbia) at $4,914 per FTE. (p. 68.) This relative comparison reflects California's long-standing commitment to no tuition and low fees, as well as its success in enrolling the bulk of its public postsecondary population in the lower cost community college system and its very large student population.

[90] Lenth, The Tuition Dilemma, pp. 11-13.

In California, there has been significant policy deliberations on the appropriate method to levy fees with concern to preserve the Master Plan tenet of affordability.[91] These discussions focus the financing of higher education costs as a shared responsibility between students, their families and society. CPEC, after long study, recommended the fee increases be tied to a given percentage of the cost of education: given a 3-year phase-in, fees cannot exceed 30 percent of the average cost of instruction at CSU and no more than 40 at UC.[92] After these levels are reached, year-to-year increases would be based on some predictable index such as California personal per-capita income, according to CPEC.[93]

This approach, which has not been adopted by the Legislature,[94] has received criticism for its purported lack of an incentive for the universities to contain costs or for its susceptibility to manipulation by the universities to generate income.[95] Countering this criticism, CPEC points out that the computation is based on prior-year expenditure figures and therefore could not be so manipulated when fees are set.[96]

Efforts to link student fees to actual costs are based upon the work in the 1970s of the Carnegie Commission on Higher Education. In a 1973 report, the commission made various recommendations about "tuition policy": 1) that government's share in this financing shift more to the federal level away from state and local efforts; 2) that the state tuition subsidy be based on income not a blanket entitlement,[97] and that fee or tuition increases should be linked to increases in available financial aid; 3) that independent postsecondary institutions get more state funding; 4) that student charges should be geared to the actual cost of each level of education; 5) that student loans should be utilized more to permit affordability; and, 6) that the gap between public college and university charges and

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[91] See The Commission's Extant Recommendations on Policies About Student Charges and Financial Aid, (Sacramento: California Postsecondary Education Commission, April 18, 1994,) pp. 1-39. Options for Setting and Adjusting Statewide Community College Fees, (Sacramento: California Postsecondary Education Commission, April 18, 1994,) pp. 1-45. Also, Professional Degree Program Fees, (Sacramento: California Postsecondary Education Commission, June 6, 1994,) pp. 1-31. This report raises the issue of whether or not to charge professional or graduate students a differential fee. For various approaches for the student and their family to financing tuition or fee costs, see Robert Foose and Joel Meyerson, Alternative Approaches to Tuition Financing: Making Tuition More Affordable, (Washington, D.C.: National Association of College and University Business Officers, 1986.) The report discusses accelerated payment plans, delayed payment plans, pricing and discounted payment plans and other techniques. Two other reports [Making College Affordable Again (Washington, D.C.: National Commission on Responsibilities for Financing Postsecondary Education, February 1993), and Michael McPherson and Morton Shapiro, "Keeping College Affordable: A Proposal from Two Economists," (New Brunswick, New Jersey: Consortium for Policy Research in Education, 1992)] call for significant increases in the federal Pell Grant program as the means to fund higher education.

[92] The Commission's Extant Recommendations, p. 23.

[93] Adjusting Future Undergraduate Student Charges at the State's Public Universities, (Sacramento: California Postsecondary Education Commission, June 27, 1993,) p. 2.

[94] The California State Senate, in an effort to demonstrate its strong concern over escalating student fees and to encourage more higher education governing board independence of university administrations, rejected gubernatorial nominees to the UC Board of Regents and the CSU Board of Trustees. This was the first such action in over 100 years.

[95] See Pat Callan, "Indexing Student Fees to Instruction Costs at CSU is a Bad Idea," Sacramento Bee (op ed), June 1, 1993. Also, Adjusting Future Undergraduate Student Charges, p. 1-2.

[96] The Commission's Extant Recommendations, p. 22.

[97] For a discussion of the concept of "tuition subsidy," see Thomas Wallace, "Public Higher Education Finance: The Dinosaur Age Persists," Change, July/August 1993, pp. 56-63. "State general revenue or tax support to public institutions provides a tuition subsidy to all students regardless of their individual wealth and financial need. While low- and middle-income families suffer financially or are unable to send their children to college, an enormous amount of state tax money is used to provide financial aid to those families who do not need financial assistance to obtain an undergraduate education." (p. 59.)

independent college and university tuition be reduced through modest and gradual public tuition increases.[98]

In their review, the commission determined that public tuition levels in 1973 were about 17 percent of total educational costs and recommended that this share rise to 33 percent over the next decade, with the remaining two-thirds of cost to be covered by government.[99] Although a subsequent report found existing student share to be closer to 24 percent as opposed to 17 percent (thus making it easier to get to 33 percent),[100] this report caused about as much debate in 1973 as did the CPEC effort to develop similar policy two decades later.

Many of the Carnegie concerns, however, have found their way into current policy. Foremost among these is tying fee increases to increases in financial aid. In fact, financial aid is the one bright spot in higher education finance, as state support nationwide has increased. "Between 1970 and 1993, the share of state tax fund appropriations for higher education that went into direct grant assistance to students increased from 3.2 percent to 6.5 percent."[101]

But, the sobering counterweight to this development is that steep fee increases, combined with bad economic conditions to greatly increase the number of student financial aid applicants, have caused California to lose ground in the percentage of needy students receiving grants. In 1985-86, 29 percent of eligible applicants received a grant: 64,362 out of 223,611.[102] In 1991-92, only 21.9 percent of applicants received a grant: 73,226 out of 334,672.[103] And, this occurred nationally as well. In 1982-83, state grants covered 49.5 percent of the students receiving a federal Pell Grant; in 1991-92 that proportion had dropped to 38.1 percent.[104] So, the share of the state budget for financial aid rose but not enough to keep the need gap from growing even further.[105]

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[98] See Higher Education: Who Pays? Who Benefits? Who Should Pay?, (Berkeley, California: Carnegie Commission on Higher Education, 1973.)

[99] Ibid.

[100] Tuition, (Berkeley: Carnegie Commission on Higher Education, 1974,) pp. 13-15.

[101] Mortenson, "Restructuring Higher Education Finance," p. 32. This increase needs to be examined, however, in light of the state's proportional share of aid. See Lawrence Gladieux, "Bright Hopes and Paper Promises: The Changing Picture of Student Aid Policies in the 1990s," The College Board Review, Late Winter 1992-93, pp. 15-32. "...the federal government in 1991-92 supplied about 75 percent of direct aid to students; the states 6 percent; and institutions (using private endowment, donor, or recycled tuition revenue) 19 percent." (p. 15.)

[102] Tom Mortenson, "State Grant Coverage of Needy Undergraduates," (Iowa City, Iowa: Postsecondary Education Opportunity, April 1994,) p. 3.

[103] Ibid.

[104] Ibid., p. 2.

[105] For a summary of the income characteristics of California higher education students, see Family Financial Resources of California Undergraduates, (Sacramento: California Postsecondary Education Commission, February 21, 1993.) For both private and public higher education students in California, 49.2 percent of financial aid comes from grants and scholarships, 4.7 percent from work study and 46.1 percent from loans. For UC, it was 56.3 percent from grants, 2.8 percent from work study and 40.9 percent from loans. At CSU, 52.9 percent grants, 6.4 percent work study and 40.7 percent loans. At CCC, it was 66.2 percent grants, 16.3 percent work study and 17.5 percent loans. Student profiles for each public higher education segment differ rather dramatically. At UC, more than 90 percent of the undergraduate students are full-time, over 80 percent are dependent on their parents for financial support and over one-third of those families have incomes greater than $72,000 per year (about 17 percent come from families with income over $96,000 per year.) Conversely, at CCC, more than three-quarters of the students attend part-time, about 80 percent are independent of their parent for financial support and more than half of those have incomes under $24,000 per year.

This growing need gap has in turn set off a financial aid policy debate similar to the fee setting discussion.[106]

While California has a strong tradition favoring low fees, the literature on student behavior does indicate fees play a role in retention and degree completion. Jeff Gilmore, through regression analysis, determined that higher charges for tuition or fees (even after controlling for the effects of other variables) improves on average student educational progress. "That is, not only do many students seem to judge institutional quality on the basis of price, but the very payment of that price apparently represents a psychological investment and commitment to the institution. The higher the price, the stronger the commitment must be [in order for the student not to feel that (they have) made the mistake of a bad investment."[107] While this finding seems to correlate with recent general assistance and workfare trends (e.g., investment from the individual improves the effort), many would argue that the lost access to higher education far exceeds the number that would be spurred by greater cost to greater effort.

Nevertheless, it is the strong California tradition of maximum access and low cost that prevents fee revenue from being the resource to fund future workload increases. Furthermore, the recent large year-to-year increases, given the low fee tradition, make it likely that the Legislature will attempt to restrict future fee hikes to the 10 percent cap provided for in state law.

As declining state support has forced the institutions to look elsewhere for support, however, student fee revenue is not the only source institutions have used to backfill state funds. UC, because of its broad range as the state's doctoral granting institution, has a much more complex budget than either CSU or the community colleges. UC has expanded its revenue base through increased efforts at fundraising, overhead from research and revenue from technology transfer. CSU has had great success in increased fundraising efforts. But, because its primary mission is teaching, income from research does not figure significantly in the system's budget. For community colleges, state and local support comprises more than 90 percent of its systemwide budget.[108]

Through private fundraising, UC has increased its support from private gifts by nearly 300 percent over the last decade: from $123.1 million in 1982-83 to $472.4 million in 1992-93.[109] For CSU, support from private gifts has increased by over 400 percent: from $21.8 million in 1982-83 to $109.4 million in 1992-93.

For UC, overhead from federal research (which is the most significant source of research funding) has grown significantly as well: from $180 million in 1988-89 to $233 million in 1992-93, or 29.4 percent over the last five years. This yield reflects UC pre-eminence among research universities.

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[106] In the Fall of 1993, the California Student Aid Commission began work on a master plan for financial aid. See "Framework for a Long-Range Strategic Plan," (Sacramento: Student Aid Commission, undated.) Also, see Options and Alternatives for Undergraduate Student Fee and Financial Aid Policies, (Sacramento: California Postsecondary Education Commission, February 21, 1993) and Restructuring the State's Financial Aid Programs, (Sacramento: California Postsecondary Education Commission, April 18, 1993.) These discussions have focused on need versus merit as an awarding criterion as well as "decentralizing" the state grant program. It should be noted that funds for institution-based grants in California exceed those for state grants.

[107] Gilmore, Price and Quality in Higher Education, pp.94-95.

[108] In 1993-94, 54.9 percent of the community college budget came from local property tax revenue. The 1993 budget agreement shifted $2.6 billion in this revenue from local governments to K-14, but 12 counties shorted K-14 $159 million (16 percent would go to community colleges). The 1994-95 budget agreement attempts to restore these funds to K-14. See "June Governor's Budget Plan," (Sacramento: California Department of Finance, June 13, 1994,) p. 4. Also, another aspect of concern about this revenue source is the collapse in housing prices. If property is reassessed at lower values, less property will be paid, representing declining revenue to K-14.

[109] University of California-Division of Academic Affairs/Budget Office, Faxed Chart, June 20, 1994

Hugh Graham and Nancy Diamond conducted a study of 300 American research universities and evaluated per capita faculty research productivity on five measures (funds received from federal grants, the number of articles published in scholarly publications other than journals, the number of articles published in top-rated scientific journals, the number of articles published in social science journals and fellowships in arts and humanities). Research by Graham and Diamond shows that, in the competition for the $9 billion in federal research grants, UC has no peer. First, all nine campuses are very competitive in this effort, not just one or two. Secondly, when compared to flagship counterparts in Illinois, Indiana, Michigan, Minnesota, North Carolina, Washington, Texas and Wisconsin, UC had 12 percent more per capita in federal grants, 28 percent more prestigious fellowships in arts and humanities and 42 percent higher success rate in publishing research findings in top-rated science journals.[110] All of this translates into a technology transfer program unequaled by any public postsecondary system: from $473,000 in revenue from patents, royalties and other fees from applied research in 1982-83 to $9.4 million in 1992-93.[111]

While these efforts have yielded results, none of these enterprises, however, will provide the future funding necessary to finance projected workload growth. But, notwithstanding this circumstance, California's state interest in providing public funding to the three segments to ensure the social and economic goals outlined in Part I is threatening if state funding continues to decline and segmental income from outside sources continues to grow. California's flagship institution--UC--received only 18.1 percent of its budget from state funds in 1993-94. That level of support, and the previous two-decade trend toward further disinvestment, threatens to essentially "privatize" the university or place in the category of quasi-public colleges and universities in states like Pennsylvania.[112]

What are the workload demands on higher education today and for tomorrow?

California is serving about 1,267,171 full-time equivalent students during the 1993-94 academic year: 151,400 at UC, 247,844 at CSU and 867,927 at the community colleges.[113] Budget cuts as a result of revenue shortfalls during the 1990-94 recession have had a substantial impact on enrollments.[114] "In 1991-92, CSU FTES enrollment was 270,729. For 1993-94, the (Governor's) budget estimates an enrollment of 246,520. This is a decline of 24,209, or 8.9 percent, over a two-year period. The UC's

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[110] See Hugh Graham and Nancy Diamond, "Dollar for Dollar, UC tops U.S. in Research Grants and Articles," Sacramento Bee (op ed), August 16, 1993.) The findings are to be published by John Hopkins University Press as The New American Research University.

[111] Annual Report on Technology Transfer Program (Oakland: University of California, 1994,) p. 24. Also, see Report To President Peltason on the University of California Technology Transfer Program, (Oakland: University of California, March 8, 1994.) This report discusses the proposed decentralization of the program. For a view urging caution about technology transfer, see David Blake, "The University's Role in Marketing Research Discoveries," The Chronicle of Higher Education, May 12, 1993, p. A52.

[112] Pennsylvania has a category of "state-related institutions", besides the state-supported ones. The state-related institutions, such as Pennsylvania State University and Temple University, receive about 17-18 percent of their budgets from the state of Pennsylvania, which in turn has limited say in the affairs and missions of these institutions. The state-supported institutions in Pennsylvania receive about 42 percent of their budgets from state government. Nationally, depending on the mission of the institution, state support has slipped, but UC's level of public support is under the national norm.

[113] Fiscal Profiles, p. DISPLAY 41. Also, see Analysis of the 1994-95 Budget Bill, (Sacramento: Legislative Analyst's Office, February 23, 1994.) p. F-9 and F-10.

[114] See "The College Enrollment Drop," The Sacramento Bee (Editorial), January 17, 1994, p. B14. Also, see Lisa Lapin, "College Enrollment in State Falls 8%-- Biggest Drop in U.S.," The Sacramento Bee, January 14, 1994, p. A8. ""If you look at the unmet demand--all the students we should be serving but are not--the statistics understate (emphasis added) the problem," (Patrick) Callan (executive director of the independently-funded California Higher Education Policy Center) said. 'We are reducing the education level of Californians. If we continue this way, the average education level of the state will be lower a decade from now.'" The analogy would be to the unemployment rate: it is a statistic that understates the true job need because it doesn't count those who have given up looking for work or are underemployed.

enrollment declined from 156,371 in 1991-92 to 151,713 in 1993-94, which is a 4,658, or 3 percent, decrease. The community colleges have also experienced significant declines in total enrollments since 1991-92. Enrollment declined from 952,654 in 1991-92 to 887,905 in 1993-94, which is a 64,749, or 6.8 percent, decrease."[115]

These calculated reductions are the largest postsecondary education enrollment declines in history and violate the Master Plan tenet of providing access to all eligible Californians (as those eligible did not decline but rather those that could or would participate).[116] Put in context, these losses would be nearly the equivalent of wiping out the entire public college and university systems in the states of Hawaii, Idaho and Nevada.[117]

Californians have historically utilized their public college and university systems, perhaps to a much greater degree than they have the public elementary and secondary system. Whereas California is under the national average of their population with a high school diploma and exceeds the national average on high school dropouts, the state beats the national average on the percentage of the population with some college but no degree, the percentage of the population with an associate's degree, the percentage of the population with a bachelor's degree and the percentage of the population with an advanced or postgraduate/professional degree.[118]

"Arizona, California, Colorado, Kansas, New Mexico and Alabama are most successful in attracting their citizens and non-residents to the state's public colleges, having a total public enrollment more than four times the state's yearly number of high school graduates."[119] Indeed, RAW ranked California second in the nation in 1992-93 among the states in its college participation ratio (full-time public higher education students per high school graduate), with a 57.9 percent rate of college attendance by recent resident high school grads.[120]

And, on top of this already high rate of utilization, the workload for California higher education has been projected to dramatically increase in the coming decade. Called Tidal Wave II (the first large wave of students being the 1950s-1960s and generated the need for a Master Plan), the exact size of this increase is open to debate but it without doubt will be one of the largest postsecondary influxes in U.S. history.

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[115] Ibid. California's community college fees are the nation's lowest. But community colleges did not charge fees until 1984. Thus, enrollments in community colleges tend to be the most sensitive among segments to fee increase "sticker-shock." Historically, a $1 fee increase translates into a 1 percent drop in statewide community college enrollments.

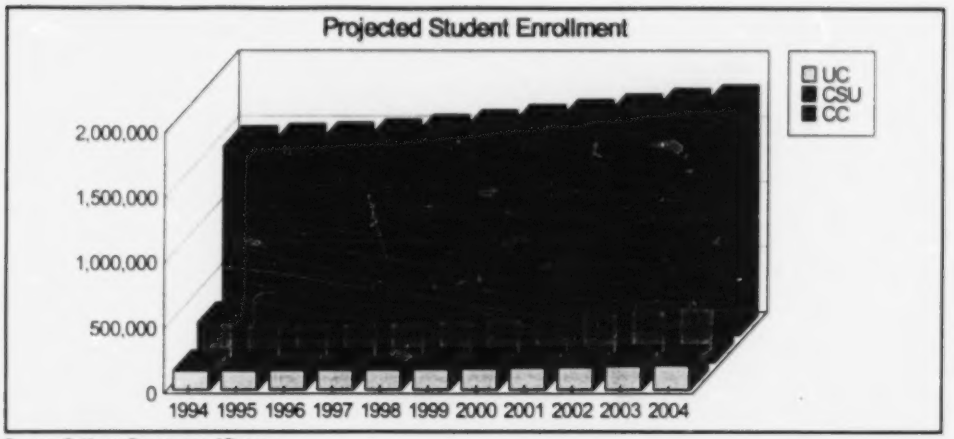
[116] Time for Decision: California's Legacy and the Future of Higher Education, (San Jose: The California Higher Education Policy Center, March 1994,) p. vi. See "Discussion Paper #5: Student Charges and Aid," (Sacramento: Assembly Higher Education Committee, 1993,) p. 3. "Most education research indicates that a 10 percent fee increase dampens enrollment demand by between 2 percent and 6 percent. The negative enrollment effect is more pronounced for larger increases. The actual impact is almost always obscured by other factors. For 1992-93, the observed community college enrollment decline of approximately 3 percent, for example, reflects the countervailing effects of population growth and exceptionally high unemployment; absent those factors, the enrollment drop would have been much more severe."

[117] State Profiles, pp. 208-213.

[118] Statistical Abstract, p. 155. Percent of population high school graduate: US average--30.0; California--22.3. Percent of population high school dropout: US average--11.2; California--14.2. Percent of population with some college, but no degree: US average--18.7; California--22.6. percent of population with an associate's degree: US average--6.2; California--7.9. Percent of population with a bachelor's degree: US average--13.1; California--15.3. Percent of population with an advanced degree: US average--7.2; California--8.1.

[119] State Profiles, p. 18.

[120] Ibid., p. 58. California ranks 9th in terms of public college and university students per 1,000 state resident population: 41 FTE students to every thousand residents. (p. 59.)



Source: California Department of Finance

Work done by the California Higher Education Policy Center projects a FTES undergraduate enrollment increase of slightly more than 50 percent over the period from 1991 to 2005. This translates into somewhere between 460,000 to 500,000 new students above the 1.3 million already enrolled.[121] DOF, in its 1993 projection series released last Fall, concurred with this forecast: 505,300 by 2005.[122] CPEC had made earlier projections of higher numbers--700,000 to 800,000--but more recent demographic and enrollment data suggest those estimates may be excessive.[123]

What all of these projections point to is a very significant increase in the historical workload of California higher education, although this workload will be moderate when compared to workload increases in other program areas of the California state budget.

What are the resources that higher education has and will have to meet these demands?

Dennis Jones, Ronald Parker and Peter Ewell--all nationally recognized higher education finance analysts--studied the workload forecasts and historical resource mix of California's colleges and universities. Their conclusion was that, if business continued as it has [no changes in: a) proportional distribution of students across sectors, b) educational costs per FTES undergraduate student in each of the sectors, and c) proportions of costs borne by students and/or the state], State General Fund appropriations to higher education would have to increase 85 percent after inflation.[124] According to their figures (which reflect just operating costs), the level of support would have to increase in inflation-

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[121] Dennis Jones, Ronald Parker and Peter Ewell, The Past as Prologue: Examining the Consequences of Business as Usual (San Jose: The California Higher Education Policy Center, June 1993,) pp. 3-4. Also, see Patrick Callan and Joni Finney, By Design or Default? (San Jose: The California Higher Education Policy Center, June 1993.)

[122] "University of California--General Campus 1993 Projection Series," (Sacramento: California Department of Finance, November 1993,) pp. 3-4 (unnumbered). "California State University--1993 Projection Series," (Sacramento: California Department of Finance, November 1993,) pp. 3-4 (unnumbered). "California Community Colleges--1993 Projection Series," (Sacramento: California Department of Finance, November 1993,) pp. 3-4 (unnumbered).

[123] Higher Education at the Crossroads: Planning for the Twenty-First Century, (Sacramento: California Postsecondary Education Commission, January 1990,) pp. 1-3, 17. "Technical Background Papers to Higher Education at the Crossroads," (Sacramento: California Postsecondary Education Commission, January 1990,) pp. 11-57. Meeting the Challenge, p. 2. Also, for a study predicated more on growth in K-12 population and extrapolating to higher education impacts, see Eligibility and Participation in California's Public Universities Through the Year 2006, (Sacramento: California Postsecondary Education Commission, October 1992.)

[124] The Past as Prologue, pp. 4-5

adjusted dollars from $4.7 billion in 1993 to $8.7 billion in 2006.[125] Translated as a share of the General Fund, higher education would need to rise from the current 12.4 percent in 1993-94 to over 16 percent in 1994-95 and nearly 20 percent by 2005-06, according to their calculations.[126]

CPEC, in its study entitled Higher Education at the Crossroads, projected an increased need in the segmental General Fund support budgets of $2.65 billion per year by 2005 and a capital outlay program of some $7.7 billion (requiring an annual bonding level of about $514 million).[127] Of course, these projections, made in 1990 prior to the recession, are predicated on enrollments levels that probably overstate by a factor of two what the conventional judgment currently is. Halving these cost projections, however, arrives at figures pretty close to other guesstimates.

There are some, however, that believe future caseloads can be met with significant changes to the current methods of service delivery and campus configuration. In November 1991, the Board of Governors of the California Community Colleges set up a independent citizens' panel, called the Commission on Innovation, and charged it with coming up with a blueprint to meet the projected workload within existing resources without undermining educational quality. The result was a report, entitled Choosing the Future. If existing approaches are used, the report estimated that the community college would require a 33 percent increase in state funding and a capital outlay of $4 billion in new facilities over the next 12 years.[128] However, by extensive use of new technology to foster active learning and improved use of existing facilities coupled with better course scheduling, the report concludes that the operating expenses and 75 percent of capital needs can be met within existing resources.[129]

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[125] Ibid.

[126] Ibid., p. 10.

[127] Higher Education at the Crossroads, pp. 31-35.

[128] Choosing the Future, (Sacramento: Commission on Innovation, October 1993,) p. 5.

[129] Ibid., pp. 107-111. Others in the academic community take exception to this conclusion. Walter Massey, speaking for UC in response to Pat Callan's report entitled Time for Decision: California's Legacy and the Future of Higher Education, wrote: "It seems that, despite statements to the contrary, your paper is built on unquestioned assumptions that the future must resemble the past--low fees, broad offerings, easy access--and that a little more efficiency on our part would accomplish that. This could not be more wrong. While these are goals we would like to attain, adjustments in productivity will make only a small contribution to attaining them." Walter Massey, Letter to Patrick M. Callan, April 21, 1994, p. 8.

Conclusion

So, in conclusion, California and it's higher education system, as contrasted to its sister states, has distinct funding and workload characteristics:

- California's system of higher education has one of the largest workloads of any state and among the highest in its rates of participation by eligible students;
- California state government, in the wake of Proposition 13, has average tax wealth or capacity, relative to other states;
- California, continuing its long-standing tradition of no tuition and low fees, and despite tremendous recent year-to-year fee increases, has a low to medium student/family effort or contribution to the overall cost of education, relative to other states; and,
- California's state budget appropriations for higher education are low relative to its capacity to fund programs.

Within these budget parameters, the resources projected to be available to higher education over the next 15 years will not be adequate to meet the projected workload, if service delivery operates as it currently does. Because California has a strong state interest in seeing higher education fulfill its missions for both social and economic reasons as outlined in Part I of this report, some long-term plan must be developed to accommodate the workload.

Part III

THE SOLUTION: How California Can Maintain Its Commitment to Higher Education

California will come to depend more than ever on higher education to fill social and economic needs. However, if the state government's pattern of disinvestment continues, colleges and universities will not have the means to carry out their vital roles.

Exactly what can be done to reverse the downward spiral in funding and restore commitment to the Master Plan? This report recommends a strategy calling for a joint effort by higher education institutions and the state government.

For its part, state government should reverse its pattern of disinvestment by: enhancing revenues, reducing skyrocketing caseloads in other programs, and restructuring the budgetary process.

Individual campuses and systems will thrive in the future only by responding to financial squeezes in the same manner that successful businesses have responded--by cutting costs and refocusing the organization toward efficiency and effectiveness.

Colleges and universities might embrace new operating models such as those aimed at reforming current faculty reward systems and developing incentive budgeting. Reforms undertaken in Illinois, Colorado, Ohio, and Tennessee may be useful as a guide.

Students must take greater responsibility to utilize opportunities which will help better prepare them for postsecondary education and reduce the time to degree.

In the future, performance monitors can be used to link funding more directly with policy goals. Finally, the Legislature should introduce a constitutional amendment earmarking revenues for higher education, if the Constitutional Revision Commission does not develop an amendment recommendation which uniformly changes the budget process. This initiative would also serve to reaffirm the public's level of commitment to the ideals of the Master Plan.

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Institutional Reforms

The prophetic words of Tom Hayden, written in March 1986 when few people foresaw the possibility of a higher education funding crisis[1], now ring so true:

> In another possible scenario the demand for reform could arise from the pinched budget prospects for the years ahead. The presumed need for greater spending on all levels of education, together with the competing needs in health, prisons and infrastructure, is likely to be greater than any available revenues, especially assuming federal cuts in higher education funding. One by-product of these finite budgets could be forced reordering of higher education goals in California. The results could be disastrous. Reform of a process as complex as higher education should not be executed by the blunt sword of [year-to-year] budget slashes.[2]

As documented in Part II, California higher education has indeed become the budget balancer over the four years of the 1990-94 recession, losing nearly a billion dollars in state funding support had it been funded on a workload basis in the absence of a recession. But, even prior to the 1990-94 recession, California had been divesting itself of its 1960s Master Plan commitment to funding higher education. As presaged by Hayden, this state divestment has mirrored a national trend where public colleges and universities have been losing ground as a state budget priority to other spending categories, such as prisons or health care.

This downward spiral has either paralleled or occurred as a result of a growing national chorus of criticism of higher education operations. Previously immune from such things, higher education in the opinion of many lost the high measure of public trust that it once commanded. Some attribute this change in public perception to rapidly increasingly students fees in combination with a growing perceived faculty preoccupation with research to the detriment of teaching.[3] "In effect, they argue that institutions are charging students more at the same time they are delivering less."[4] Even some parties with higher education background have given credence to this view. Clark Kerr, former President of UC, points out that the average UC teaching load was 9 hours per week when the original Master Plan was adopted in 1960. He maintains that the current teaching load has declined to about half of the 1960 average.

While there may be a shift from teaching, academic advising, and mentoring to research and related activities, the overwhelming bulk of faculty work very hard. Research is, and will continue to be, an

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[1] Lee Kerschner, who is now Interim President at CSU-Stanislaus and was formerly Executive Director of the 1980s California Commission on the Review of the Master Plan for Higher Education, told a meeting of the CSU Trustees in 1993 that "fiscal concerns were not a part of the review process--didn't occur to anyone, as it was assumed that California would always deliver on its historic promise of open and equitable access."

[2] Hayden, Beyond the Master Plan, p. 30.

[3] This concern has been most prominently raised by Ernie Boyer. See Ernest Boyer, Scholarship Reconsidered: Priorities of the Professorate (Princeton, New Jersey: Carnegie Foundation for the Advancement of Teaching, 1990.) In the literature, the complaint is that, because the reward system in higher education is slanted toward research, all institutions other than the flagship, research systems (such as the four-year colleges and universities) push to become research institutions. For some interesting evidence in this regard, see Ghosts in the Classroom: Paying More, Getting Less at California State Universities, (Sacramento: Office of Senator Tom Hayden, 1994.) In response to this report, a review of the Legislative Analyst's Office found that SDSU has "falsified (faculty workload reports) on a widespread basis." The practical effect appears that some faculty teach less than others and they presumably spend the release time on research, although the primary mission of CSU is teaching. And, students receive fewer overall course offerings.

[4] William Massey and Andrea Wilger, "Productivity in Postsecondary Education: A New Approach," Educational Evaluation and Policy Analysis, Winter 1992, Vol. 14, No. 4, pp. 361-376.

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important aspect of the academy. But concerns about teaching need to be addressed. The issue centers on how faculty spend their time, not whether they spend too little time working. Since the reward and recognition structure in higher education is based primarily upon the quantity and quality of research, it is natural for those incentives to influence faculty behavior and preference in terms of time management.

According to William Massy and Andrea Wilger, this shift in emphasis has had a profound effect on this public view of spiraling costs and declining return.[5] In their analysis, teaching is an easy element to evaluate for the public: either there are more course sections being offered or there are not. Conversely, research--while important to the public--is more difficult to define; it's more difficult for the average person to see whether more research is being conducted or not, regardless of rising costs. This public view is mirrored in legislative concerns. The Legislature has asked UC to reformulate its systemwide guidelines for faculty teaching loads in order to increase undergraduate teaching and teaching effectiveness.[6]

Rising costs in higher education, in the estimation of Massy and Wilger, are the result of this shift toward research, which they have dubbed the "academic ratchet," and additionally they identify four other factors:[7] 1) government regulation, micro-management and cost-shifting, 2) ever-escalating inter-campus rivalry to provide competitive administrative and faculty salaries, termed by Massy and Wilger as the "cost disease,"[8] 3) constant layering of new knowledge upon still relevant old knowledge (resulting in ever-escalating pressure to layer on new courses with the curriculum becoming increasingly specialized and deconstructed), referred to in the literature as the "growth force"[9], and 4) the explosion in bureaucracy (as administrators are layered on to keep up with ever-expanding number of courses and personnel) coupled with the administrative risk aversion instinct of consensus management, called the "administrative lattice."[10]

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[5] Massy and Wilger, "Productivity in Postsecondary Education," pp. 362-364.

[6] See Expenditures for University Instruction, p. 8. This report states that a typical UC faculty member spends 54 percent of their time on direct and supplementary instructional activities, 28 percent of their time on research unrelated to instruction and 17 percent on university and public service activities. For further evidence of legislative concern, see Letter of Senator Tom Hayden to President Peltason and Members of the UC Board of Regents, November 18, 1993, proposing creation of an "undergraduate college" to emphasize and reward teaching. "The second suggestion I want to make is restructuring UC campuses to enroll at least all freshmen and sophomores in a common "undergraduate college" which would focus intensely on high-quality teaching, smaller classes and seminars, and counseling." (p. 2.)

[7] Ibid., pp. 364-365. Collaborative thought on this situation has been a centerpiece of a national dialogue on costs and public confidence. This dialogue has been featured over the last 6 years in a on-going periodical published by the Pew Charitable Trust called Policy Perspectives, which is edited by Robert Zemsky.

[8] Ibid., pp. 365-366.

[9] Ibid., p. 366.

[10] Ibid., pp. 366-67. Very few analyses of administrative cost have been done because of the nearly obtuse way figures are reported. Karen Grassmuck has studied the growth of administrative and academic support staff in higher education over the 10-year period from 1975 to 1985. Culling from data obtained from the federal Equal Employment Opportunity Commission, she calculated that this component of university personnel had grown by an average of 60 percent during that decade, while faculty numbers had increased less than 6 percent on average during this time period. At UC, for example, there has been a significant internal debate about administrative cost growth. The UC administration maintains that, over the 20 year period (1971-72 to 1991-92), this cost from State General Funds has remained constant at 11 percent of expenditures. When all sources of income are taken into account, UC contends there has been a slight drop--from 12 to 11 percent. Additionally, UC reports that administration has taken the largest cuts during the 1990-94 recession, amounting to 20 percent. Indeed, UC--unlike its two counterpart segments--has continued to serve its Master Plan population during the recession by protecting its instructional core from the deepest cuts. Other critics, however, are not convinced. See Charles Schwartz, Looking into the UC Budget, (Berkeley: periodic private newsletter, 1993-94,) Reports 1-11. Schwartz, a retired UC-Berkeley physicist, maintains that UC actually spends between $209 million to $320 million more than was expended on administration (after accounting for inflation and certain growth factors) in 1966-67. Schwartz also disputes the level of UC

Page Smith, in his work entitled Killing the Spirit, contends that the research imperative results in a plethora of published work with little real world value (as faculty seek to publish at least something to get recognized and thus rewarded) and an on-going effort by faculty as they advance--and purportedly have more to offer those seeking to learn--to decouple themselves from teaching.[11] The long-term impact is that the faculty, because of their reliance on external (largely federal) research funding, have less connection to their campus and more to their "guild" or colleague counterparts on other campuses.[12] In effect, they lose sight of their campus mission and focus more on their guild and its concerns. They surrender more teaching responsibilities to part-time instructors and graduate assistants; have less interaction with students; and become increasingly involved with a very specialized aspect of their guild, all to the detriment of their institution.[13]

Daniel Alpert concurs: "To individual faculty members at comprehensive research universities, the national disciplinary community is typically more meaningful to their professional careers and more familiar in terms of culture and day-to-day contacts than are faculty members in the other departments on their own campus."[14]

The slant toward research causes a teaching drift which may have an impact on instructional quality and the overall focus of the campus. Coupled with rising costs, this impression has spawned a rising chorus of public criticism of higher education. As Part I raised higher education's role in improving productivity in the economy, these criticisms have spurred calls for colleges and universities to improve the efficiency of their operations.[15]

Whether or not this development has influenced the state funding trend, there are other growing concerns and expectations about higher education and its evolving social/economic role:

- As higher education increasingly is equated with getting a job, students as consumers increasingly want tangible results for their money and effort, not just a grounding in the liberal arts and what it is to be an educated person for altruistic reasons.

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administration cuts during the recession, contending those expenditures actually rose by 7 percent. This criticism has been fueled by the controversy surrounding executive pay at both UC and CSU. Former UC President Gardner's pay package and the circumstances of its formulation spurred the UC Regents to commission a study on executive pay. The report's author, former Legislative Analyst A. Allan Post, found that top UC executives have received "a series of ill-conceived and covert compensation increases and perquisites." UC has implemented most of the report recommendations to redress the situation.

[11] Page Smith, Killing the Spirit: Higher Education in America, (New York: Viking, 1990,) pp. 192-198.

[12] Ibid., pp. 209-214

[13] The widely-held view is that part-time faculty and teaching assistants offer less in the way of teaching quality. Interestingly, there is research to substantiate the opposite view. Jeff Gilmore, in his Price and Quality in Higher Education, found that, as enrollments go up and percentage of part-time faculty increases, so too does educational progress. "That is, as enrollments go up, the percentage of full-time faculty goes down (and the percentage of part-time faculty increases), which, in turn, produces an increase in student progress. This double negative is curious. The fact that larger size would result in more part-time faculty is not surprising, but the fact that more part-time faculty improves student retention and graduation rates runs contrary to accepted wisdom on the subject. Perhaps part-time faculty provide more student contact time, or, to the degree that there is a faculty research culture propagated by full-time faculty, perhaps part-time faculty devote more time to classroom teaching activities, which would have a positive effect on retention." (p. 97.)

[14] Daniel Alpert, "Performance and Paralysis: The Organizational Context of the American Research University," Journal of Higher Education, Volume 56, No. 3 (Columbus: Ohio State University Press, May/June 1985,) p. 252.

[15] See Richard Anderson and Joel Meyerson, Productivity and Higher Education: Improving the Effectiveness of Faculty, Facilities, and Financial Resources (Princeton, New Jersey: Peterson's Guides, 1992.) Also, see William Massey and Joel Meyerson, Strategy and Finance in Higher Education, (Princeton, New Jersey: Peterson Guides, 1992.)

- As there has been a steady shift in the financing of public education from government to students, so too has the profile of the "traditional student" shifted. Formerly, a student was 18-22 years of age, attended full-time and was Caucasian. Increasingly, the typical student will be older, Hispanic or Asian-American, female and enrolled part-time. State divestment of higher education and its consequences hits some demographic groups much harder than others, putting more pressure on higher education to be responsive to changing needs.

- The white-hot whirlwind of new technologies and the resulting information explosion threaten higher education's long-standing hold over the discovery and propagation of knowledge, challenging it to change its approaches.

All of these trends have emerged as higher education has struggled with dwindling public funds. How has higher education responded?

The Pew Higher Education Research Program, a privately-funded group of scholars who have been looking at higher education operations over the last six years, developed a model (resource constraint paradigm) to graphically display traditional postsecondary education's response to state budget cuts. Reporting as a result of a 1992 American Council on Education survey that many higher education campuses were taking cuts,[16] Pew scholars wanted to analyze how these cuts affected institutional behavior.

To accomplish this design, campus leaders from nine colleges and universities as well as three state systems of higher education were interviewed during the 1991-92 academic year. "The prevailing impression left by the interviews was of the inherent difficulty in rethinking traditional patterns of institutional growth and contraction. One can speculate that this difficulty is due to the lack of models for organizational restructuring in higher education, as well as a natural resistance to changes in work practices."[17]

Under the model, when facing a state budget cut, college and university administrators first seek to enhance and diversify the various other revenue sources of the institution. They do this by increasing student fees, by mounting new fundraising and development or capital campaigns, and forming new business ventures.[18]

If this approach does not create enough revenue to match expected expenditures, campus leaders then proceed to impose budget discipline to reduce or eliminate non-essential activities or programs.[19] Here they end what Pew scholars call cost-plus pricing (the practice of setting student fees after the cost of existing programs and all new initiatives has been calculated) and they institute what is commonly understood as short-term austerity measures until things return to "normal," such as deferral of maintenance, imposition of hiring freeze and salary cuts, and targeted cuts on travel and

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[16] Robert Zemsky, et al., "Toward Restructuring: Assessing the Impact of Budgetary Constraints on College and University Operations," in Policy Perspectives (Philadelphia: The Pew Higher Education Roundtable, February 1993), Volume 4/Number 4/Section B, p. 7B. "The survey reports that 57 percent of the nation's institutions faced a mid-year budget cut last year, and 57 percent expect budget cuts in 1992-93...The current period of resource constraint follows a decade and a half (nationally) of growth in administrative and academic expenditures substantially in excess of the rate of inflation."

[17] Ibid., p. 8B.

[18] Ibid., p. 9B.

[19] Ibid., p. 11B.

other auxiliary expenses.[20] "Cost-plus pricing obviates the need for prioritizing activities because all the institution's uncovered costs are ultimately passed off to the students in the form of tuition and fees."[21] The danger of ill-conceived retrenchment measures is that faculty and staff morale can be damaged with ever-lingering effects, and short-term expenditure savings can turn into greater long-term fiscal headaches.[22]

According to Pew scholars, the next stage of facing a funding crisis is that campus leaders begin to reshape the institution. At the macro-level of campus-wide restructuring, they begin to prioritize programs, they eliminate or reduce the size of low-priority or little-utilized programs, and they "grow by substitution."[23] Growth by substitution means that required program enhancement costs (i.e., selecting which programs should be allowed to grow) must equal the programs cut or passed out over a specified time frame. Also, they begin to develop incentives for educational quality and productivity, establishing target goals, connecting gains in quality and productivity to the campus budget process and revising the budget itself to focus more on what Pew scholars call responsibility center budgeting.[24] Defined as a management system which decentralizes resource acquirement and budgeting to carefully selected programs or units, each center generates its own revenue and must manage its resources.

At the micro-level of the programs themselves, departments and units begin to re-engineer how they do their work. They begin to prioritize tasks and outcomes, they begin to decentralize authority by empowering workers but holding them accountable for results. They start to focus on staff development, investing in process improvement and training.[25] They also begin to change the campus culture to instill a management focus on quality: put the customer (e.g., the student) first, set up effective performance feedback procedures and make these improvements ongoing and teamwork-oriented.[26]

If these approaches to facing funding challenges sound familiar, they are. They are the principles of the new economy enunciated by Tony Carnevale. There are many reasons why the public sector may be starting to borrow from the more successful aspects of the private sector. One theory is advanced

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[20] Ibid.

[21] Ibid.

[22] See Ben Wildavsky, "Exodus of UC Teachers Spurs Fears of Brain Drain," San Francisco Chronicle, May 7, 1994, p. A17, A20. Also, Lisa Lapin, "UC Halts Retirement Exodus, Ponders Impact," Sacramento Bee, May 20, 1994, p. A1, A6. "University of California President Jack Peltason on Thursday called an end to a series of early retirements (e.g., under a program permitting faculty, who voluntarily elect to retire earlier than under existing offerings, to retire with enhanced benefit levels) that have eliminated one in five UC professors since 1991...UC Berkeley will lose two Nobel laureates next month. UC Davis will lose three National Academy of Science winners, and nine of the 11 faculty members that made up its nationally ranked dramatic arts program." (p. A1.)

[23] Ibid., p. 11B-12B.

[24] Ibid., p. 12B-13B.

[25] Ibid., p. 14B.

[26] Ibid., pp. 14B-15B. In Policy Perspectives, Pew scholars outline the following plan to restructure and strengthen the campus." 1) plan now for reduced levels of employment; 2) resist the temptation to make across-the-board cuts; 3) recognize that administration is not the business of the business; 4) engage faculty energy; 5) integrate top-down leadership with bottom-up management; 6) engage trustees as guides and goads, but not as micro-managers; 7) simplify the organization; and 8) last hired cannot mean first." (Volume 3, Number 2, Section A, February 1991, pp. 4A-8A.)

by Ted Gaebler, author of the best-selling book Reinventing Government.[27] Gaebler believes, like Drucker and Carnevale, that we are in a time of transition where the old way of doing business no longer works or is acceptable.[28] He thinks that people have become alienated from their government and are no longer looking to government for solutions to all problems, or are suspicious of the traditional government approach to matters. It is a view that has some credence: Bill Clinton was elected on a platform of change, Ross Perot became a phenomenon by castigating business as usual and governments across the world are under siege by public dissatisfaction.[29]

Gaebler believes that this disaffection or alienation does not allow people to view government as they once did--as an entity that operated differently from private enterprise in the name of the public good. According to Gaebler, people are increasingly asking why government cannot operate mean and lean, why it too cannot be efficient. He thinks that the alienation led to this perception, which in turn is forcing government to change. The old distinctions between public and private enterprise are, thus, becoming increasingly irrelevant and the two will become increasingly more alike in operations. The old adage that it's good enough for government work is no longer acceptable. The focus is now on performance. These changes in public attitude have important consequences not only for California's public colleges and universities but for higher education nationally.

Perhaps for the above reasons, then, a performance standard is being applied across state governments. This commonly takes the form of some benchmark or goal that is set based on some historical performance and a calculated improvement. Leading the way in this effort have been Oregon and Minnesota.[30]

Minnesota categorizes performance indicators into 4 types: 1) input indicators [amount of resources used for a specific program or service]; 2) efficiency indicators [cost--either by money or time--per unit of output or outcome]; 3) output indicators [quantity of units produced or services provided]; and 4)outcome indicators [impact--including quality--of the service or program]. Based on experience and a review of the literature, the Minnesota report: 1) acknowledges division of opinion on linking performance to funding; 2) warns agencies to refine performance measures and data before linking them to funding; 3) notes division of opinion on whether to reduce or increase funding as a response to poor performance; 4) acknowledges that complexity of some programs may require a broad

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[27] For a view which outlines the counterside, see Rob Gurwitt, "Entrepreneurial Government: The Morning After," Governing, May 1994, pp. 34-40.

[28] See Anthony Carnevale and David Carnevale, "Public Administration and the Evolving World of Work," Public Productivity & Management Review (San Francisco: Jossey-Bass Publishers, vol. XVII, no. 1, Fall 1993,) pp. 11-12.

[29] Frank Vivano, "Revolt Against the Political Establishment," San Francisco Chronicle, May 5,1994, p. A1, A11. "But the public anger in the richer half of Europe has another, less coherent source: a sense that the establishment itself is frozen, hamstrung with an aging cast of leaders who are unprepared to change in response to the post-Cold War world's challenges...'Change--in economic development, public attitudes, social expectations--is coming from the bottom up these days, not from the nation-state down,' says David Miliband of the Institute for Public Policy Research, an influential London think tank associated with the Labor Party."

[30] See Performance Budgeting, (Saint Paul, Minnesota: Office of the Legislative Auditor, February 1994.) Also, see Oregon Benchmarks: Standards for Measuring Statewide Progress and Government Performance, (Salem, Oregon: Oregon Progress Board, December 1992.) The Oregon report developed out of economic development strategic planning by the executive branch of Oregon state government. Together with a plan, the Legislature created the Oregon Progress Board to translate the economic plan into measurable goals. The board developed 17 lead benchmarks and 158 benchmarks; for each benchmark historical performance data was presented for the years 1970, 1980 and 1990, and then a projected performance was made for 2010. The imposition of a 1990 ballot measure limiting property taxes required the Legislature to ask state agencies to pare their budgets to 80 percent of their former amount without impeding progress to the goals. Examples of benchmarks in postsecondary education: percentage of baccalaureate graduates who achieve established skill levels, percentage of baccalaureate graduates who are proficient in a language other than English, percentage of students, graduates and employers who are satisfied with their experience with higher education (no data on any benchmark indicated.)

performance review rather than single performance indicators; 5) warns that linking performance to funding could result in unintended incentives or disincentives; and 6) concedes that public budgeting often amounts to policy choices and tradeoffs, not merely a mechanical reaction to data or formulas.[31]

Joseph Wholey and Harry Hatry argue that performance monitoring is feasible and worthwhile. But they acknowledge two major concerns: 1) such monitoring cannot distinguish the extent reported outcomes are the result of agency efforts or other external factors, or both; and 2) indicators must be refined enough to avoid producing misleading performance data.[32]

All of these reservations, however, have not impeded states from experimenting with performance monitoring. Sandy Ruppert points out in an upcoming Education Commission of the States report that about one-third of the states nationally require public colleges and universities to report on some performance indicators.[33] According to Ruppert, these benchmarks are used to 1) monitor the general condition of higher education; 2) inform planning or budgetary decisions; 3) identify potential problem areas or areas for improvement; and 4) assess progress on state priorities or goals.[34] Ruppert's survey uncovers nearly 40 different performance indicators being used throughout the states to benchmark higher education.[35]

How Other States Have Revitalized Higher Education Institutions

So, in this climate of criticism, declining state support, and rising expectations, what are other states doing?

In Illinois, at the research universities and 4-year institutions, the statewide Board of Higher Education initiated in 1991 a program called Priorities, Quality and Productivity (P.Q.P.).[36] The rationale was to make resources available to public colleges and universities for their high priorities by downsizing, consolidating and eliminating lower priority or quality programs. The high priority areas where these savings would be reinvested were undergraduate teaching, minority student achievement, college affordability, competitive salaries and repair or maintenance of existing facilities. So, although academic program review has been a feature of planning for decades, the new fiscal climate is forcing a more concerted look at curriculum and a sharper prioritization of programs. The institutions under the Board submitted their recommendation within these guidelines in September of 1993. Of the 190 programs recommended to the Board for elimination, 44 percent were eliminated or reduced, 26 percent are under review and 30 percent were retained. As a result of this effort, $39.7 million was reinvested in the high priority programs from cost savings.

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[31] Performance Budgeting, pp. 24-27.

[32] Joseph Wholey and Harry Hatry, "The Case for Performance Monitoring," Public Administration Review, Volume 52, No. 6, November/December 1992, p. 608.

[33] Sandra Ruppert, "Charting Higher Education Accountability: The Roots and Realities of State-Level Performance Indicators," (Denver: Education Commission of the States, June 1994,) p. 1.

[34] Ibid., pp.8-9.

[35] Ibid., pp. 9a-9b (Table 2.)

[36] See Priorities, Quality, and Productivity of Illinois Higher Education: Summary and Assessment for 1992-93 and Recommendations for 1993-94, (Springfield, Illinois: Illinois Board of Higher Education, November 9, 1993.)

At the community colleges, the institutions used the P.Q.P. guidelines along with an accountability measure developed by the Illinois Community College Board to eliminate about 100 low priority instructional programs in 1992-93. This on-going productivity review effort yielded $65.2 million which was reinvested.

Illinois' productivity guidelines cover 5 key areas: 1) instruction, 2) public service and research, 3) overall academic functions, 4) administrative functions and 5) state policies affecting higher education. These individual guidelines are:

FOR PRODUCTIVITY EVALUATION OF INSTRUCTIONAL UNITS:

Capacity in relation to student demand - Excessively high enrollments may cause large class sizes, closed course sections, and high student-faculty ratios, jeopardizing quality. In contrast, low enrollment drive up costs.

Capacity in relation to occupational demand - Imbalances between occupational demand and the number of students enrolled and degrees granted in associated academic programs may contribute to low productivity.

Centrality in relation to instructional mission - Enrollments by majors and non-majors and the number of majors from different programs taking Coursework in a field are indicators of the centrality of a program to the institution's instructional mission.

Breath of the instructional unit - The number of courses developed and the number of specialization offered within a program-major are measures of the breadth of an instructional unit. For example, in an analysis of one institution's catalog, the graduate programs in one department, which enrolled fewer than 30 students, offered instruction in 15 sub-fields with over 70 courses.

Quality of the instructional unit - During the last five years, Illinois public universities reviewed about 1,000 individual programs. As a result of program review during this period, over 50 programs were eliminated, and over 30 were restructured. Also during this period, the Board staff identified concerns related to approximately 70 programs. The most commonly identified concerns related to the clarity of programmatic objectives and the breadth of the curricular offerings.

Success of graduates - Trends in the employment, further education and satisfaction of graduates are important measures of the effectiveness of the education provided by a college or university.

Program costs - Institutions should evaluate all degree programs to identify programs with very low or very high costs and to identify the factors determining costs levels.

FOR PRODUCTIVITY OF PUBLIC SERVICE AND RESEARCH UNITS:

External support - One measure of the value of these functions is the extent to which state appropriated funds are matched by external funds.

Capacity in relation to need/demand - Institutions should also evaluate the capacity of individual units to carry out research and public service in relation to the demand for the findings, products, and services or research and public service centers and institutes.

Quality of research and service - There are currently 127 formally organized research and public service units at Illinois public universities.

Centrality in relation to instructional mission - Institutions should evaluate the importance of each research or public service center or institute in contributing to the instructional mission of the institution.

FOR ACADEMIC PRODUCTIVITY OF THE INSTITUTION:

Time patterns - Institutions should consider shortening vacation schedules and semester breaks and modifying academic calendars so that students can pursue Coursework on a year-round basis and institutional facilities and resources are effectively utilized.

Faculty scholarship and renewal - Re-examine their policies related to faculty development and sabbaticals to ensure that they are in balance with research, and public service expenditures.

Academic support and technologies - Opportunities for productivity improvements may be identified by analyzing the use of technology such as computer and telecommunications networks.

Consolidation of programs - Improve productivity by consolidating units with low levels of activity with other units on a campus or statewide basis.

Organizational structures and processes - Improve and save by streamlining academic processes and procedures and by establishing cooperative arrangements between academic units and with other institutions to share resources.

FOR PRODUCTIVITY OF ADMINISTRATIVE FUNCTIONS:

Administrative and support functions at Illinois public universities and community colleges now consume more than half the annual state appropriations to these sectors.

Centrality - Institutions should consider eliminating or reducing administrative units and functions that are peripheral to their primary mission.

Breadth of Functions - Growth in administrative functions can contribute to low productivity.

Redundancy of Functions - Institutions, systems, and the Board of Higher Education should eliminate or consolidate functions that are redundantly provided by different administrative units.

Efficiency of Operations - The productivity of administrative and support functions, perhaps more so that academic functions, can be improved by streamlining operations and by capitalizing upon new technologies.

FOR PRODUCTIVITY OF STATE-LEVEL PROCESSES:

Effectiveness of state-level processing and reporting requirements - Consolidating, re-orienting, automating, or reducing the various processes and information reporting requirements at all levels of higher education.

Effectiveness of state-level regulatory requirements - Reducing unnecessarily duplicative or inefficient regulatory procedures and requirements.

So, Illinois is using an intensive reallocation process to reshape their public colleges and universities and to fund high priorities.

Colorado's approach is different: it is committing new state funds to higher education beyond its base budget as incentive funding to encourage certain performance outcomes. John Folger and Dennis Jones studied this kind of approach and had the following conclusions:

- Select a limited number of goals and objectives for special funding;
- Collection and reporting of performance data must be at reasonable cost and effort to the institutions;
- Incremental change takes time to succeed;
- Incentive funding must be at a significant enough level to be worthwhile to the institution and to change behavior; and
- Incentive funding must be directed to the persons responsible for achieving the goal. For example, if it affects instruction, the funding must be directed at faculty and faculty behavior.[37]

In Colorado, as a result of a 1993 state law, a committee of state political and higher education leaders meet annually to select 5 priorities for higher education incentive funding.[38] The committee can amend these priorities year-to-year as it sees fit under the general parameters established by law. Current legislation would set up parameters of 1) improved productivity; 2) growth in enrollment; 3) expanded job training; 4) strengthened ties with K-12 schools; and 5) financial aid. The amount appropriated as incentive funding is still in doubt as the budget for 1994-95 had not been enacted at the time of the publishing of this report. However, the Governor's Budget appropriated $18.6 million (or 3.7 percent of a total 1994-95 budget of $500 million), with the bulk of the incentive funding going to enrollment growth and financial aid. Formulas developed by the statewide higher education coordinating board will be used to distribute the funds to institutions according to their performance.

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[37] John Folger and Dennis Jones, Using Fiscal Policy to Achieve State Education Goals, (Denver: Education Commission of the States, August 1993,) p. 25.

[38] See House Bill 94-1110 (Denver: Colorado House of Representatives, 1994.) Also, Kit Lively, "'Incentive Financing' for Colorado's Colleges" The Chronicle of Higher Education, March 2, 1994, p. A22-A23.

Higher Education Performance Indicators in other States			
Data Elements	**States**	**Data Elements**	**States**
Enrollment, progression, retention and graduation by race, gender, disability and high school achievement	CO, FL, IL, KY, NY, SC, TN, TX, VA, WI	Faculty diversity	CO, IL, NY
Pass rates on professional licensure exams	CO, FL, IL, KY, NY, SC, TN, TX, WI	Student performance on nationally normed exams	IL, NY, WI
External or sponsored research funds	CO, IL, KY, NY, TX, VA, WI	Continuing education/extension enrollments and public services activities	IL, KY, WI
Admission standards and measures of the first-year class against standards	CO, IL, NY, TN, VA	Average faculty salary	CO, IL
Students in remedial courses; students exiting remedial courses and completing entry-level courses	KY, SC, TN, TX, VA	Alumni and private contributions	CO, NY
Total degrees awarded by institution and discipline	FL, IL, KY, TN, WI	Student characteristics	IL, SC
Number and percentage of accredited programs and programs eligible for accreditation	IL, KY, SC, TN	Charges to students	IL, NY
Lower division courses taught by full-time faculty, part-time faculty and graduate assistants	SC, TN, VA, WI	Two-year transfer students completing four-year degrees	IL, KY
Student, alumni, parents, and employer satisfaction	FL, KY, NY, WI	Student course demand analysis	FL, KY
Total student credit hours produced by institution and discipline	FL, IL, KY, NY	Course completion rates	NY, TX
Student transfers between two- and four-year institutions	IL, NY, SC, TN	Student/faculty ratios	CO
Placement of graduates	SC, TN, VA, WI	Facilities maintenance	WI
Student assessment results	IL, NY, VA, WI	Availability of student financial aid	CO
Total contact hours of instruction by faculty rank, institution, and course level (faculty workload)	FL, KY, NY	Upper division undergraduate students participating in sponsored research programs	SC
State appropriations per resident student and per capita	CO, NY, VA	Students who have some kind of summarizing experience (thesis, recital, comprehensive exam) in major	VA
Classroom and lab utilization	FL, IL, KY	Reporting and resolution of sexual harassment complaints	WI
Sustained financial commitment to instruction	CO, NY, WI	Faculty retention and development	WI
Average class size	IL, VA, WI	Workplace Safety	WI
Time to degree and number of credits by institution and degree	FL, KY, WI	National faculty and student awards	NY
Availability of academic programs	CO, IL, NY		

Source: Education Commission of the States

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Also, Colorado has been publishing for the last 4 years what it calls a "scorecard" on higher education's performance. This report evaluates the system's effectiveness based upon 4 educational values: 1) educational excellence, 2) educational access and diversity, 3) efficiency in the delivery of education, and 4) adequate resources for the delivery of education.[39] A sampling of the measures used to benchmark performance on the value of educational excellence, as an example, is provided below.

VALUE: Educational Excellence

MEASURE: ACT and SAT test scores of first-time freshman

FINDINGS: Average ACT scores of first-time freshmen have remained fairly constant over the last five years. In fall 1993, the average score of all Colorado students attending Colorado colleges (22.5) was higher than both the national average (20.7) and the average of all Colorado high school students who took the test (21.3).

MEASURE: Performance of Colorado Graduates on Graduate and Professional School Exams

FINDINGS: Graduates of the University of Colorado Law School passed the Colorado Bar Examination at a higher rate than the state average, 92.0% versus 83.0% in 1993.

Colorado graduates pass the Uniform CPA Examination at a higher rate than the national average.

In 1993, Colorado graduates passed the National Council Licensure Examination for Registered Nurses at a higher rate (93.2%) than the national average (91.2%).

Colorado community and local district college graduates passed the National Council of Licensure Examination for Practical Nurses at a higher rate (97.9%) than the national average (89.6%) in 1992.

MEASURE: Completion Rates

FINDINGS: Graduation and/or transfer rates for student in two-year programs increased for the fall 1987 class compared to the fall 1986 class, but have declined in recent years.

The percent of four-year college and university students receiving a bachelor's degree after five years is significantly higher than the percent after four years, 44.1% compared to 18.8% for the fall 1986 class. The rate after six years is 52.7%

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[39] See Scorecard on Colorado Public Higher Education: How the Public Higher Education System and Its Students Perform on Selected Measures. (Denver: Colorado Commission on Higher Education, January 1994.) Also, see Colorado Higher Education Master Plan, 1993-98. (Denver: Colorado Commission on Higher Education, undated.)

MEASURE: Average Faculty Salaries

FINDINGS: Average faculty salaries in Colorado are about 6% lower than salaries at comparable peer institutions. The differential is even greater in the Community Colleges, where the average faculty salaries were 14% below average peer salaries in 1991.[40]

So, through the use of incentive funding, Colorado is attempting to encourage performance outcomes in certain predetermined areas.

In Ohio, selective excellence programs were instituted in the 1980s to encourage achievement, for example, in recruiting and retaining outstanding faculty (eminent scholars) and undergraduate teaching (program excellence). This model, which is much like incentive funding but does not have outcome measures, started in Tennessee under Lamar Alexander's governorship and spread nationally. It provides incentive grants beyond base funding in 5 areas: 1) eminent scholars (endowed professorships); 2) program excellence; 3) academic challenge (centers of excellence); 4) productivity improvement (employment training and study of workplace efficiency); and 5) research challenge (seed money for research). With a 1985-87 biennium appropriation of $61.7 million, Ohio invested more in this approach than most states. Recession, however, killed the ability to provide the year-to-year funding. The National Center for Higher Education Management Systems (NCHEMS) conducted a 1992 evaluation of this program and found this approach--unconnected to outcomes and without state-level coordination or priority-setting--tends to fuel autonomous, duplicative institutional effort rather than an integrated system of higher education.[41]

The statewide higher education board in Ohio conducted a study into the current and projected condition of their colleges and universities. This report, entitled Managing for the Future, investigated funding of higher education in Ohio and found that:

- Revenues to public colleges and universities have become diversified as government support has declined over the last 15 years (state support per FTE student has dropped nearly 23 percent after inflation from 1987-88 to 1992-93;
- Higher education costs rose far above inflation owing to its labor-intensive aspect (80 percent of budget on average) and administrative staff/faculty salary increases;
- Faculty salary increases were needed in a very competitive market to offset precipitous declines in the 1970s and catch-up played by other states in the 1980s;
- Increases in cost were closely associated with tuition increases, purportedly to pay those costs;
- Cost containment strategies were developed (improved use of technology, part-time faculty, reorganized administration, program cuts, deferred maintenance, and cooperative programs to reduce duplication).[42]

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[40] Scorecard, pp. 8-17.

[41] An Evaluation of the Ohio Selective Excellence Program. (Boulder, Colorado: National Center for Higher Education Management Systems, October 13, 1992.) p. 4.

[42] Managing for the Future: Challenges and Opportunities for Higher Education in Ohio. (Columbus, Ohio: Board of Regents, July 1992.) pp. 29-45.

Among these finding, the report also determined that there had been a 10 percent decrease in statewide undergraduate teaching activity over the last decade.[43] This finding resulted in 1) a legislative mandate to restore the teaching level and 2) the creation of a task force on faculty workload.[44] The task force issued a report recommending departmental promotion and tenure, as well as merit pay, be based on teaching comparable to the current consideration of research; and creation of other rewards for teaching (teaching start-up funds, teaching development grants, evaluation of departmental chairs on achievement of institutional teaching goals, designation of Ohio Teaching Academy comprised of master teachers, and faculty mentoring--where a structured interaction takes place at the departmental level between seasoned/senior and junior faculty on methods and technology of teaching).[45]

Tennessee, the pioneer of performance funding, started its benchmarking in 1984. In its funding formula for higher education, the statewide higher education coordinating board allocates to institutions 5.45 percent of postsecondary appropriations to performance funding based on 6 indicators: 1) program accreditation (institutions are rewarded based on the percentage of their eligible programs which are accredited); 2) major field assessment (institutions are rewarded based on graduate placement exam scores, external review of graduate programs, graduating student performance on major field tests and placement rate of program graduates); 3) undergraduate general education outcomes (student standardized test scores); 4) alumni satisfaction surveys (results compared to national survey or norm); 5) improvement measures (extent of improvement on first 4 indicators); and 6) developing and piloting of assessment instruments.[46]

From this effort, Tennessee reports results:

- In 1984, only 55 percent of their academic programs were nationally accredited; today 95 percent are;
- Tennessee university students are performing slightly above national norms;
- Graduates of professional programs in Tennessee are competitive nationally in mastery of licensure and certification examinations;
- 85-95 percent of career program graduates at Tennessee 2-year colleges and institutes are being placed in jobs for which they trained; and,
- Outside support of Tennessee university research has more than doubled over the last 5 years.[47]

Much argument can be made on cause and effect relating to these results, but the real, unquestioned impact is that performance funding is influencing higher education behavior in Tennessee in areas considered state priorities.

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[43] Ibid.,p 40

[44] See Report of the Regents' Advisory Committee on Faculty Workload: The Evaluation and Reward ((Columbus, Ohio: Board of Regents, June 1994.)

[45] Ibid., pp. 15-21.

[46] Performance Funding Standards for Public Colleges and Universities, (Nashville, Tennessee: Tennessee Higher Education Commission, February 9, 1990,) pp. 2-31.

[47] Higher Education Serving Tennessee, (Nashville, Tennessee: Tennessee Higher Education Commission, undated,) pp. 9-11.

What Can Be Done In California?

Given the structure of California's budget, only a finite range of solutions exists to reverse the trend toward disinvestment and allow the state to maintain its Master Plan commitment. These possible solutions include: increasing taxes, decreasing tax expenditures, reducing workloads, changing the methods of delivering services in order to increase productivity, restructuring the responsibilities of state and local governments, earmarking any growth in revenue under existing tax structures, and reprioritizing or shifting existing state and local appropriations.

Among these options, the best solution would be a plan that amends the state budget process to generate a modest increase in revenue for budget priorities while removing various constraints. If that approach is not feasible politically, then consideration should go to a plan that combines the extension of a current tax due to expire, the permanent suspension of a certain tax expenditure, an effort to improve the productivity of higher education institutions, and setting a ceiling limit on state program caseload growth. This plan would necessitate shared sacrifice among all parties traditionally involved in public higher education funding--government, campuses, and students and families--in order to maintain the major promises of the Master Plan: access, affordability, equity, and quality.

To accomplish this plan, the following six-part strategy is recommended:

STRATEGY #1: Recommit the state's investment in the Master Plan

As documented in this report, California has backed away from its commitment to offer every Californian an opportunity to go to college. With a huge influx of students projected over the next decade and a half, the promise becomes ever more dim.

The California Constitution Revision Commission is working on a plan to address the structural state budget problem outlined in Part II of this report. Following sound budgetary policy, the commission has proposals under consideration which would revise the property tax constraints of Proposition 13, revise or eliminate the constitutional spending ceiling of Proposition 4, eliminate Proposition 98 and revise the sales tax to expand the base toward services. The reason for this is that these constraints in a theoretical sense hamper general tax fund usage for state spending priorities. Their projections show that state spending will require $5-7 billion in new revenue over the next decade.

If these changes are approved by the voter, the constraints of the Gann limit on new revenue and Proposition 98 would need to be addressed.

This approach is the best solution to reforming a budget process that has become increasingly dysfunctional. However, such a sweeping change may be difficult to accomplish.

Any fundamental reorganization of funding will undoubtedly be confronted by a citizenry increasingly distrustful about the manner government allocates revenues for purposes not clearly defined. Public experience with Proposition 172, where voters approved a dedicated amount of revenue for public safety but some local governments backfilled health and general assistance programs, has further disillusioned voters. Thus, changes of the magnitude envisioned by the commission may not occur until there is both a substantial improvement in the economy and government begins to perform better in the eyes of the public. Even then, budget reform probably may not involve as much revenue as currently under consideration.

Should this effort fail, then, the Governor and Legislature must develop a mechanism that protects higher education's funding base long-term, provides for some of the needed enrollment influx and sets aside a certain percentage of funding for performance budgeting. One such remedy would be to place on the June 1996 ballot a constitutional amendment which would earmark revenues from the top two income brackets as well as the increased tax revenue produced from permanent suspension of the renters' tax credit, in a special revenue fund for educational excellence.

There are sound arguments for and against earmarking of state funds. The major advantage to earmarking is that the recipient or beneficiary has some level of guaranteed funding, permitting a greater degree of long-term planning. This guarantee is important in limited trust situations, such as establishing bond payments as a priority in order to maintain state government's capacity to raise revenue through the bond markets. Some would argue that even earmarking is not much of a guarantee, using the lost ground example of K-12 over the last decade under Proposition 98. But, a strong argument can be made that K-12 would have lost a much more significant share of its funding--given the decade's fiscal pressures--had it not been for Proposition 98.

The chief disadvantage is that, as alluded to above, good budgeting dictates that state government needs maximum flexibility to respond quickly to shifting priorities or sudden revenue changes. As with the guarantee of Proposition 98, budget writers have only 50-60 percent of the State General Fund with which to plan or deal with fiscal adversity, creating funding inequities where non-earmarked programs have to shoulder significantly larger budget cuts during revenue shortfalls. Put another way, preferences for popular programs hamper funding for non-popular programs. Furthermore, in times of tight revenue, and earmarked level of funding tends to become a budget ceiling rather than a floor.

Earmarking top income tax brackets would produce a revenue source that will grow as the economy grows. Conversely, it is more difficult to tax income in the higher brackets than with other brackets. This occurs because income in this category tends to be only 40-50 percent from salary with the balance coming from capital gains and interest from investments. Individuals in these brackets, therefore, have much more ability to adjust when they will be taxed, creating some volatility in revenue estimating.

The renters' tax credit revenue will be difficult to earmark as it is a tax expenditure, but using a Department of Finance projection of revenue, funds equal to the projection can be diverted from the General Fund to this new special fund. Revenue from suspension of the renters' tax credit will not be available until the 1997-98 fiscal year, but the income tax revenue would be available in 1996-97. However, given the slow recovery from the 1990-94 recession and the state budget structural imbalance, it is conceivable that these two revenue sources will be needed just to maintain baseline budgeting.

It will be important that the resulting revenue, about $800 million in 1995-96, be split equally between K-12 and higher education. Also, higher education's base budget will need to be protected and K-12 will need assurances that their Proposition 98 guarantee will not be reduced.

Of the $600-700 million in new higher education funds this would generate in 1997-98, $150 million should go to the CAL Grant program to assure that all needy and eligible applicants receive a grant.[48] The remaining funds would go to the special fund and be allocated out either to the segments or to institutions directly based upon performance outcome evaluations, which will be discussed below. This funding, together with the base funding and other strategies, will accommodate the projected enrollment of Tidal Wave II.

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[48] The California Student Aid Commission has reported that 4 out of every 5 eligible, needy students applying for a grant do not receive one. In 1995-96, $150 million would provide all applicants with a grant. Should fees increase, obviously, the amount needed to fund these grants would increase.

Once the public has addressed the commitment to the Master Plan by consideration of either the Constitutional Commission's proposal or the one outlined above, the Governor and Legislature should respond by calling in late June of 1996 a Summit on Higher Education Funding. This effort would focus on the effects of any constitutional change, and review student fees and financial aid.

This opportunity would permit state political and higher education leaders, faculty and students/parents to participate in shaping appropriate policies. The meteoric rise in fees and the ever-widening need in a recession-racked economy for grant funds has resulted in ever-greater rationing: only one in five needy and eligible applicants receives a grant. After being turned down for a grant, the one who continues to pursue an education become dependent on loans that they very often can't repay when they graduate. Collective student loan debt has grown to $41.9 billion. Since this situation must be addressed, the Student Aid Commission, in concert with CPEC, should also consult with the public segments and the independent sector to negotiate an increase in the private sector CAL grant. Some 10,000 to 15,000 students could possibly be accommodated at a private institution more cost effectively to state government if the cap were eased.

In terms of capital expenses, current facilities should be adequate to address enrollment expansion until the year 2000 for the UC and CSU, based on calculation by CPEC and the LAO. Community college facilities, along with the deferred maintenance, seismic safety and technology needs of all campuses, should be reviewed on a yearly basis.

STRATEGY #2: Reduce state budget caseload growth in those programs that threaten higher education's future funding

As evidenced earlier in this report, prison caseload growth over the last decade has exploded, garnering an ever-expanding share of the state budget. This increase has occurred in part to mandatory and longer sentences, despite the fact that crime in California peaked in 1980 and has been in general decline since.[49] Yet the public perceives crime as pervasive and on the rise. And, this public perception is driving policy decisions that will have staggering long-term fiscal consequences that California's current state budget cannot support. With the structural budget problems as outlined in Part II, California will have to pay for the $1.6 billion increase in prison operating costs and the $6.6 billion new construction costs of the "three-strikes" legislation (AB 971), by restricting access to higher education.[50] Prison, Aid to Families with Dependent Children and Medi-Cal caseload growth were edging out other programs under current structure even prior to AB 971. Given the research done by Jay Helms on the cost of infrastructure expenditures referenced in Part II of this report, policy makers need to prioritize what functions state government under the current financing structure can and want to fund.

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[49] CAL Facts, p. 42. See Joan Petersilia, "Crime and Punishment in California: Full Cells, Empty Pockets, and Questionable Benefits," (Berkeley: California Policy Seminar, May 1993.) "The data suggest that the massive investment in crime control--and the doubling and redoubling of the prison population in recent years--may have had little effect on California's crime rate, particularly violent crime." (p. 2.) Also, see Danielle Starkey and Vic Pollard, "The Prison Dilemma," California Journal, April 1994, p. 11. "Decades of research have failed to turn up any solid evidence that longer sentences have been a significant deterrent on crime, RAND researcher Peter Greenwood told state senators considering the "three strikes" bills."

[50] For cost projections on AB 971 (1994), see Letter of James Gomez, Director of the Department of Corrections, to Senator Presley, February 28,1994. Also, see John Jacobs, "Over a 'Three Strikes' Cliff?," Sacramento Bee, March 8, 1994, p. A17. "If the public knew that entire prison wards would eventually consist of geriatric prisoners costing $30,000 a year or more, (Senator) Hayden said, they might ask, "Is revenge worth that much? We open prison doors by closing college doors. I don't think the majority of Californians want that."

STRATEGY #3: Cut campus costs and refocus the organization toward regional collaboration, efficiency, and sharpened goals and missions

Future funding for public higher education is going to require the maximum utility from the state funds invested. The adage that higher education has a static level of productivity is not acceptable in an era of limits and shared sacrifice. There is nothing inherently wrong in asking for an organization to modernize its operations and improve efficiency.

Robert Birnbaum has offered the following generalizations about this process: 1) Institutions will ignore matters of productivity that are defined in terms of controlling costs except under the most unusual conditions; 2) Productivity structures and processes must be developed and implemented internally; 3) Programs must complement faculty attitudes and values--not conflict with them--if they are to be successful; 4) Productivity is more a state of mind than a structure or a process; and 5) Sometimes incremental changes may be more successful than comprehensive programs for change.[51]

The Pew model, while not a course of action, does provide an insight into the method California higher education has used to approach the decline in state support. To absorb cuts in state funding, the segments have raised fees, developed technology transfer initiatives, and renewed focus on fundraising. Campuses have also slashed spending, offered senior staff an early retirement plan, cut course sections, eliminated positions and closed or downsized low-priority programs.

Indeed, the segments are now beginning to reshape their institutions in significant ways. Regional collaboration and sharing resources--among the public segments, with independent colleges and universities, and with the K-12 system--should become a top priority. College planning has long had a formal course utility review process--called program review. This process analyzes programs and coursework, adding those needed by changing social or economic circumstances, and eliminating those not needed. However, students of organizational behavior know that programs tended to be layered on, not purged. Regional collaboration, where colleges, universities and K-12 schools share resources and eliminate overlapping programs, could change this situation, if the collaboration is rewarded (or the lack of collaboration becomes a disincentive) through a performance budgeting approach as outlined in Strategy #6.

Systemwide, UC has issued a report on management that is very sound.[52] Reflecting the changing workplace principles enunciated by Carnevale, the report recommends that the UC central administration streamline its structure to become more consumer-oriented. It suggests that decision-making should be localized, that procedures should be simplified and encourage innovation, and that evaluative measures be developed.[53] Calling for a "new performance architecture", it outlines what accountability structure should be implemented.[54]

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[51] Robert Birnbaum,"The Constraints on Campus Productivity," in Productivity and Higher Education, pp 42-46.

[52] See Empowerment With Accountability: A Framework for a New Administrative Productivity at the University of California, (Oakland: Improved Management Initiatives Task Force, March 1994.)

[53] Ibid., pp. 9-11. Also, see "UC Urged to Overhaul Bureaucracy," San Francisco Chronicle, May 14, 1994, p. A19. "The nine-campus system is bogged down by a highly centralized 1950s-style bureaucracy and should replace it with a 'leaner, more productive and more service-oriented' system, according to the task force.

[54] Ibid., pp. 10-13. Those operating principles are:" 1) Accountability begins with the articulation of mission, values, goals and objectives; 2) Accountable employees and organizations must be enabled to meet and deliver mission, goals and objectives; 3) Performance must be measured, assessed and communicated regularly; 4) Personal accountability requires that performance is recognized; and 5) Accountability applies to everyone."

CSU is experimenting with a new campus operating structure in its proposed CSU- Monterey Bay that holds promise for exploiting new approaches to instruction and administration.[55]

The community colleges have produced a study through an independent citizens' commission that proposes cuts in low priority programs to reinvest in higher priority effort.[56]

Probably the best example of this effort to reshape and strengthen an institution has happened at UC-Davis. Davis has had its state-funded budget cut by nearly 30 percent since 1990-91. In a campus planning document, administrators acknowledged that the 1991-92 cuts were across-the-board but the 1992-93 and 1993-94 cuts would have to be according to academic priorities. With firm administrative leadership and vision about the direction of a reallocation plan, the long-standing public service tradition of a land-grant institution, strong Academic Senate involvement, and a well-publicized consultative and public comment opportunity, Davis cut $54.7 million out of its budget. This cut, while painful, in many ways strengthened the program offering of the university. Because the faculty was intimately involved and as they knew the relative unit strengths of academic programs, the reshaping improved the campus and its focus on mission and priorities.

As an example, campus leadership had a sense that veterinary medicine was spread too thin out over 11 departments. This notion was there in advance of the campus-wide review by subcommittees (composed of campus leaders and representative of all constituencies) established to look at instruction and research, student services, administrative activities and self-supporting operations. The veterinary medicine faculty realized this weakness as well and came forward with ideas to reduce the 11 departments to 6.

Another aspect of this review was that the cuts are phased-in and the reduction was actually over $10 million more than needed. But the overage was used to provide money for new and creative things (fiber-optics to wire every building on a campus largely constructed in the 1960s, a new neuroscience program and so on). These actions were taken to reinforce publicly a commitment to excellence and avoid the mentality of decline that invariably comes with program cuts and layoffs. The campus administration consciously wanted to come up with creative enhancements to keep morale up during a time of change and transition to the unfamiliar.

Another example of innovation that Davis has demonstrated is better regional cooperation between the four segments to share resources and reduce duplication. UC- Davis has contracted with the faculty at Sacramento City College to provide remedial education at a fraction of the cost to replicate what is a strong community college program. Also, the UC-Davis Division of Education and the Sacramento State University School of Education deliberate on how to take advantage of coursework offered on the other campus or to avoid course duplication.

A large part of the productivity improvement will lie with the better utilization of technology. In California, CSU with its Project Delta and CSUNET is far ahead of the other segments with satellite uplink capacity at all 20 campuses and downlink at 3. UC, a national leader in graduate-level postsecondary teaching excellence, is woefully behind in this effort. None of the UC campuses can communicate with one another in the manner CSU can.

The community colleges have a bold plan to utilize this technology to revolutionize instruction, faculty development and rewards and to modernize their operations. "The community colleges must also adapt to changing circumstances; like the private sector, they can do so only by investing in

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[55] See Breaking Camp--Building a Campus: The Commission's Analysis of the Proposal to Create California State University, Monterey Bay, at Fort Ord. (Sacramento: California Postsecondary Education Commission, June 5, 1994.)

[56] Choosing the Future

innovation...Interactive multimedia systems that combine full motion video, audio, animation, graphics and text with access to massive amounts of data have proven their effectiveness in ESL and selected vocational courses...In the long run, the network could be expanded to handle the full range of voice, video and data transmission needed to support distance education, teleconferencing, and telecomputing."[57]

CPEC should take the lead in working with the campuses in this effort through its responsibilities in the performance budgeting process as recommended in this report.

STRATEGY #4: To address some of the workload and cost concerns raised by Massy and Wilger, campuses should engage their faculty in a redesign of the faculty reward system as has been done in Ohio.

Faculty in California higher education are under great demands and, in the face of declining resources, they have by and large undertaken greater teaching loads.[58] However, the current reward system in higher education holds a disincentives for teaching and ultimately results in a drift in faculty time away from teaching. This occurrence contributes to academic ratchet, as pointed out by Massy and Wilger, and increases costs while diverting faculty focus from the institutional mission of the home campus to the larger guild concerns of the profession.

As suggested by Massy and Zemsky, the reward structure needs to move from the individual to the department. Without tampering with the merit step system, CPEC, in consultation with the segments, should develop a plan to earmark some of the performance funding provided for above to each individual department with parameters for on-going rewards for teaching and senior faculty mentoring and development. In the model outlined in Part I by Carnevale of the quality circle team, the department must become a more responsive and flexible organization in the 21st century. "Departments are the gateways to an institution's faculty; any successful efforts to bring about change in the academic culture must work through departmental channels. The academic department is also the key regulator of faculty behavior."[59] Utilizing Ernie Boyer's focus on scholarship of discovery, integration, application, and teaching, this reward structure should recognize differing strengths--such as the discover of knowledge (researcher), the purveyor of knowledge (teacher) or the implementer of knowledge (public service or extension agent). This plan may also look to some of Ohio's concepts, such as the Teaching Academy and other evaluative approaches.

The team should strive to focus on critical thinking, problem-solving and communication skills. The team should be interdisciplinary to take advantage of the cross-pollination of methodologies, approaches and ideas. And, the team--or department--could be fluid. "At such organizations as A. D. Little, the Rand Corporation, or many innovative industrial laboratories, technical research personnel

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[57] Choosing the Future, pp. 74-75. Also, for the potential instructional impact of technology, see Laura Evenson, "New Oracle Software Takes Notes for You," San Francisco Chronicle, May 26, 1994, p. D1. "Oracle, the Redwood City-based database management company, claims Context is the first software program to analyze the content and meaning of large passages of English text. Equipped with a 600,000-word dictionary--three times the size of a standard reference book--and up to 1,000 pieces of linguistic data on each word, plus 20,000 linguistic rules, the new product could be the basis for a new class of "smart" software to help users identify overall themes in a document using grammar and meaning rather than simple word searches."

[58] See Undergraduate Instruction and Faculty Teaching Activities, (Sacramento: University of California, March 1994.) "Despite a decline in the number of regular-rank faculty FTE because of early retirements, all measures of teaching activity by regular-rank faculty increased in absolute terms from 1990-91 and 1992-93." (p. iii.)

[59] Massy and Wilger, "Productivity in Postsecondary Education," p. 368.

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may be organized in departments corresponding to disciplinary backgrounds or areas of research activity. However, when the corporation is called on to carry out a novel development task or policy study, it creates a flexible and often temporary infrastructure designed to encourage collaboration and to assign accountability among a team of experts of differing backgrounds and skills."[60] Why not with teaching?

Many believe that the technology of distance learning or active learning will provide excellent teachers the opportunity to be accorded recognition by one's peers as is currently the case with research publication and guild evaluation.

STRATEGY #5: Students must better prepare for college work and better use their time while in college.

This matter was raised by Clark Kerr to a joint meeting of the UC Regents and the CSU Trustees. With all of the proposals about three-years degrees and other accelerated learning ideas, Kerr proposed that high school students make better use of their senior year by taking college prep courses or coursework at local community colleges. For students who prepare in this way, UC has explored the idea of entry with sophomore standing. Better use of summer session, extension courses and "telecourses" will also shorten student time to degree.

K-12 performance in educating students will have an increasingly important impact on higher education's ability to perform its Master Plan roles. In an era of limits, public education and its capacity to deliver a quality product must be viewed in the information age as a continuous system--kindergarten to college.

STRATEGY #6: Link policy goals to funding through monitoring performance outcomes.

Jane Wellman, in a report preparatory to the 1980s Master Plan review, pointed out the nexus between policy and budgeting and called for performance measures. "One of the strongest instruments for State policy influence into public higher education is the State budget."[61]

Echoing this early call, LAO, in the Analysis of the 1994-95 Budget Bill, also recommended performance outcomes regarding: 1)a "4-year degree pledge" from UC and CSU in 1995-96 for students electing to complete their degree in 4 years and 2) degrees conferred by ethnicity and their relationship to state diversity goals.[62] These measures were adopted by the budget conference committee.

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[60] Alpert, "Performance and Paralysis," p. 274.

[61] Jane Wellman, The State Budget and Public Higher Education in California: Issues for the Master Plan Review, (Sacramento: Assembly Subcommittee on Higher Education, December 1985.) Also, see Focus on the Budget: Rethinking Current Practice, (Denver: State Higher Education Executive Officers Association, May 1994.) Also, see Peter Schrag, "How They Evaluate Colleges," Sacramento Bee, December 8, 1993, p. B12. "All that may unfortunately conceal and perhaps jeopardize the more important proposal that WASC (Western Association of Schools and Colleges--a regional accreditor) will take up in April. And that's to put more emphasis on teaching and learning in evaluating an institution for accreditation and not, as now, to merely measure the qualifications of the faculty, or count the books in the library or determine whether the labs are adequate to the institution's stated mission."

[62] Analysis of the Budget Bill, pp. F16-F-22.

Of course, performance funding, to be successful, should have incentives as well as disincentives. In consultation with the segments, CPEC should investigate whether or not this linking could occur through AB 1808 requirements and then be used to allocate funding. CPEC should report to the Legislature its recommendations on this subject no later than January 1, 1996.

For any role in monitoring performance and making recommendations on the allocation of funding, CPEC should receive the budget support necessary to act appropriately.

In addition to incentives, as well as quantitative and qualitative indicators, aspects of this report may take into account the following suggestions for disincentives:

- Deny campus access to performance funding for lack of compliance in process;
- Reduce or remove campus administrative flexibility on General Fund expenditures at the institutional level;
- Require institutional oversight by a technical assistance team, or conservator, until institutional or segmental performance is consistent with clearly-stated public policy goals;
- Hold public hearings on a particular institution or segment to discuss unacceptable performance indicators and potential solutions to obtain different outcomes; and/or,
- Withhold some fraction of the base budget at the beginning of the fiscal year with release contingent on demonstrated progress on a given goal or measure.[63]

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[63] The LAO recommended something similar to this to guarantee the Master Plan access goal. "We recommend that the Legislature re-establish the relationship between the budget and enrollment by 1) establishing target enrollment levels for 1994-95 in supplemental report language, and 2) readopting Budget Bill language from the 1991 Budget Act that would adjust the budgets if actual enrollments vary from this target by more than 2 percent." Analysis, p. F-36.

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